Section A of Science Abstracts

SECTION A, PHYSICS: SECTION B, ELECTRICAL ENGINEERING

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Cumulative Subject Index

1960 - 1964 : Part I

(VOLUMES 63-67).

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FOREWORD

In order to publish the Cumulative Subject Index covering the years 1960-1964 as soon as possible after the completion of this period, it was decided to present a simple amalgamation of the published annual indexes. However, where a new subject heading was introduced during the 5-year period this has been noted and the attention of the reader drawn to the appended "see also" headings under which the relevant earlier literature will be found.

As in the annual subject indexes, the entries under each subject heading are arranged in alphabetical order of the first word, irrespective of the year of the entry.

The numbers after the entires are the serial numbers of the abstracts, and the respective years are indicated by the initial number, giving the last digit of the year; this "3=1234" means "Abstract 1234 of 1963":, "0=3456" means "Abstract 3456 of 1960".

D. S. Hopper
Director, Science Abstracts.

May 1967

This index is published in two parts:

Part I Letters A-M

Part II Letters N-Z

SUBJECT INDEX

INTRODUCTION

The entries in this index refer to the abstracts by their serial number, not by the page number. The entries are grouped under headings (printed in bold type, e.g. "**Abrasion**") which represent, in the main, general categories or concepts rather than specific names. If a heading for a particular subject does not appear, a more general heading should be consulted; for example, "Zone plates" would be listed under "**Diffraction**"; "Barkhausen discontinuities" under "**Magnetization process**". There are numerous cross-references directing attention to related headings in other parts of the index.

Many of the headings are subdivided by the use of subheadings, which are indented (i.e. printed slightly to the right) and commence with a small latter (for example, see the subheadings under "**Absorption**").

ARRANGEMENT OF HEADINGS AND SUBHEADINGS

The headings are arranged throughout the index in alphabetical order according to British Standard 1749:1951 (the "word by word" system, not "reading right through"). The subheadings, with a few exceptions, are themselves arranged in alphabetical order under their respective headings. The exceptions (for example, see the subheadings under "**Spectra**", "**Crystal structure, atomic**") are cases where a more logical order is preferable to a purely alphabetical one.

ARRANGEMENTS OF ENTRIES UNDER HEADINGS

Entries are arranged in two alphabetical groups as follows. First group: generalities and named substances (in words); second group: named substances (chemical formulae). If a search is being made for a particular substance, both the first and second alphabetical groups should be inspected since, for example, alumina may also be listed as Al_2O_3.

COLLECTED LIST OF SUBJECT HEADINGS

The alphabetical arrangement of the headings is the most convenient for locating a known heading quickly, but there may be other related headings elsewhere in the index of which the reader is unaware, and which he would only come across by accident. To assist the reader to discover all the headings appropriate to his subject, a collected list of the headings is given at the end of the index, which should be consulted as a matter of routine each time a search is made. In this list, the headings are not arranged in alphabetical order, but are grouped into sections by subject on the same basis as the arrangement of the abstracts in the monthly issues of Physics Abstracts. By using this list, the reader can quickly determine which are the headings appropriate to his subject, and they are then easily found in the main index in their alphabetical position.

HEADINGS WITH NO ENTRIES

Because physics is a developing subject, it is not possible to maintain the list of headings unchanged from year to year; it is subject to a continuous process of revision, with the introduction of new headings and subheadings, and the alteration and elimination of old ones. This process is a gradual one, however, and the great majority of the headings used in any given year are the same as those of the previous year. To assist in maintaining the continuity of the index, all the headings and subheadings in use in any of the years 1960-64 are printed, with, where appropriate, notes on the years of their introduction or removal. Those headings and subheadings, for which there are no abstracts recorded in the present volume, are followed by the announcement "No entries", this supplies confirmation that these headings had not been dropped from the index, and entries might reappear under them in a later year.

ELEMENTS, COMPOUNDS AND OTHER SUBSTANCES

The names of elements, their compounds, a few compounds of special interest (e.g. "**Water**") and a few common materials (e.g. "**Wood**", "**Paper**") are included as headings. Under these, as well as under the appropriate "subject" headings, are listed any abstracts which contain significant physical information about the element, compound or substance named; except, however, that abstracts listed under headings referring to nuclear properties, including radioactivity, are not necessarily also listed under the substance name. The entries under these headings are themselves arranged in alphabetical order of substance or nuclide names, so that a given substance can be readily located.

Inorganic compounds of the elements are listed under the first element in the chemical formula, and all the compounds of a given element are grouped under a single heading (e.g. "**Sodium compounds**"). Alloys are listed under the first constituent, e.g. Cu-Ni alloys under "**Copper compounds**". Organic compounds are grouped under "**Organic compounds**", "**Polymers**", "**Plastics**" and under special substance headings such as "**Paper**", "**Proteins**", etc.; all the latter are listed in the collected list of headings at the end of the index.

BEFORE USING INDEX, CONSULT LIST OF SUBJECT HEADINGS PRINTED ON THE FOLLOWING PAGES

LIST OF SUBJECT INDEX HEADINGS

The headings used in the Alphabetical Subject Index are listed below. The headings are grouped into sections on the same basis as the arrangement of the abstracts in the monthly issues of Physics Abstracts. Each section lists the headings which concern its subject and it follows that many of the headings are listed in several places.

An introduction to the Subject Index will be found on the previous page.

GENERAL

- Bibliographies
- Biographies
- Books
- Collections of physical data
- Conferences
- History
- Laboratories
- Laboratory apparatus and technique
- Nomenclature and symbols
- Physics
- Physics fundamentals
- Recording
- Reviews

EDUCATION

- Biographies
- Books
- History
- Laboratories
- Laboratory apparatus and technique
- Measurement
    - errors
- Physics
- Physics fundamentals
- Reviews
- Teaching
    - demonstrations

UNITS . MEASUREMENT . METROLOGY

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- Alignment
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- Anemometers
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- Area measurement
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- Constants
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- Density measurement
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- Force measurement
- Instruments
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- Length measurement
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- Measurement
    - errors
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- Nomenclature and symbols
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- Surface measurement
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- Time measurement
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- Weighing

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- Calculating apparatus
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    - digital computer programmes
- Calculation
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- Sliderules
- Statistical analysis
    - applications
- Tables, mathematical

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- Fluctuations
- Fourier analysis
- Functions
- Geometry
- Group theory
- Hysteresis
- Information theory
- Integral equations
- Integrals
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- Matrices
- Probability
- Radiation
- Relaxation
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- Statistical analysis
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    - applications, counters
- Tensors
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- Waves

GRAVITATION . RELATIVITY

- Gravitation
- Relativity
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    - special
    - unified field theories

QUANTUM THEORY

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- Dispersion relations
- Field theory, quantum
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    - interactions, strong
    - interactions, weak
    - meson field
    - quantization
- Indeterminacy
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- Quantum theory
    - application methods
    - quantization
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    - many-particle systems
- S-matrix theory
- Scattering

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- Fluctuations
- Hysteresis
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- Probability
- Quantum theory
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- Random processes
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- Statistical analysis
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- Thermodynamics

TRANSPORT PROCESSES

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- Radiation
- Transport processes

MECHANICS

- Ballistics
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- Friction
- Gravitation
- Gyroscopes
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- Mechanics
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- Pressure
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- Torsion
- Velocity

ELASTICITY . PLASTICITY

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- Damping
- Elasticity
- Photoelasticity
- Plasticity
- Relaxation
- Rheology
- Stress analysis
- Stress, internal
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- Viscoelasticity

FLUIDS

- Flow
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- Waves

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    - flow
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- Foams
- Hydrodynamics
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- Liquid waves
    - surface
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- Schlieren systems
- Sprays
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- Surface tension
- Surface tension measurement
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- Turbulence
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- Wetting

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- Electroluminescence
- Electron diffraction examination
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- Nuclear quadrupole resonance
- Osmosis
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- Polymers (relaxation
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    - acoustic waves, ultrasonic
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- Waves

GASEOUS STATE

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    - acoustic waves
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- Thermoluminescence
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    - acoustic waves,ultrasonic
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- Leak detection
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- Superconductivity

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- Dielectric properties of
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- Ferroelectric phenomena
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  - measurement techniques
  - oscillations and instability
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- Plasma
  - confinement

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  - scattering
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- Particle range
- Particle velocity analysis
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- Magnetic field measurement
- Magnetic fields
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- Magnetic measurement
- Magnetic resonance and relaxation
- Magnetism
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- Magnetization state
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- Magnetoelectric effects
- Magnetomechanical effects
- Magneto-optical effects
- Magnetoresistance
- Magnetostriction
- Magnetothermal effects
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- Paramagnetism
- Zeeman effect

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- Electricity
  - direct conversion
- Electrodynamics
- Electromagnetic fields
- Electromagnetism
- Electromotive force
- Inductance
- Magnetohydrodynamics
- Plasma
  - oscillations and instability
- Quantum electrodynamics
- Shock waves
  - effects

ELECTROMAGNETIC WAVES AND OSCILLATIONS

- Absorption
  - electromagnetic waves
- Amplifiers
- Diffraction
  - electromagnetic waves
- Diffusion
  - electromagnetic waves
- Doppler effect
- Electromagnetic oscillations
- Electromagnetic wave
  - atmosphere (propagation
  - ionosphere
  - guided waves
- Electromagnetic waves
  - radiators
- Interference
  - electromagnetic waves
- Interferometers
  - electromagnetic waves
- Interferometry
  - electromagnetic waves
- Light
  - electromagnetic theory
- Magnetohydrodynamics
- Plasma (propagation
  - electromagnetic wave
  - oscillations and instability
- Radiation
- Reflection
  - electromagnetic waves
- Refraction
  - electromagnetic waves
- Scattering
  - electromagnetic waves

RADIOFREQUENCY SPECTROSCOPY . MAGNETIC RESONANCES

- Antiferrimagnetic resonance
- Antiferromagnetic resonance
- Cyclotron resonance
- Ferrimagnetic resonance
- Ferromagnetic relaxation
- Ferromagnetic resonance
- Nuclear magnetic resonance and measurement (relaxation
- Nuclear quadrupole resonance
- Paramagnetic resonance and measurement (relaxation
- Spectra
- Spectrometers, radiofrequency
- Spectroscopy, radiofrequency

MASERS . LASERS

- Amplifiers
- Atoms
    - excitation
- Electromagnetic oscillations
- Masers
    - optical
- Molecules
    - excitation
- Optical pumping

NUCLEAR PHYSICS

- Biological effects of radiations
- Chemical effects of radiations
    - ionizing radiations
- Collections of physical data
- Nuclear physics
- Physical effects of radiations
- Physics fundamentals

APPARATUS . PARTICLE DETECTORS

- Alpha-ray spectrometers
- Beta-ray spectrometers
- Counters
    - Cherenkov
    - crystal
    - Geiger
    - proportional
    - scintillation
- Counters — contd.
    - semiconductor
    - spark
    - operation technique
- Counters, accessories
- Dosimetry
- Gamma-ray spectrometers
- Ionization chambers
- Mass spectrometers
    - accessories
    - applications
- Neutron spectrometers
- Nuclear bombardment targets
- Particle accelerators
    - linear
    - orbital
- Particle detectors
- Particle optics
- Particle spectrometers
- Particle velocity analysis
- Radioactivity measurement
    - apparatus
- Statistical analysis
    - applications, counters

Counting Circuits

- Amplifiers
- Circuits
- Counting circuits

Track Visualization

- Bubble chambers
- Cloud chambers
- Luminescence chambers
- Nuclear track emulsions
- Particle range
- Particle tracks
- Particle track visualization
- Spark chambers

NUCLEAR FIELD THEORY

- Baryons
- Collision processes
- Dispersion relations
- Field theory, quantum
    - interactions
    - interactions, strong
    - interactions, weak
    - meson field
    - quantization
- Elementary particles
- Leptons
- Nuclear forces
- Parity
- Quantum electrodynamics
- Quantum theory
    - application methods
    - quantization
    - wave equations
    - many-particle systems
- Scattering
- Scattering, particles
- S-matrix theory

ELEMENTARY PARTICLES

- Baryons
- Collision processes
- Elementary particles
- Leptons
- Particle range
- Parity
- Particle velocity analysis
- Scattering, particles
- Strange particles

Photons

- Photons
    - scattering
    - interactions
    - polarization
- Bremsstrahlung
- Cherenkov radiation
- Compton effect
- Mössbauer effect
- Gamma-rays
    - absorption
    - angular distribution
    - detection, measurement
    - effects
    - scattering
- Gamma-ray spectra
- Gamma-ray spectrometers

X-rays

- X-rays
    - effects
- X-ray measurement
- X-ray absorption
- X-ray diffraction
- X-ray reflection
- X-ray scattering

Neutrinos

- Neutrinos and antineutrinos

Electrons

- Electrons
  - absorption
  - ionization
  - radiation
  - scattering
- Electron theory
- Positrons
- Electron pairs
  - annihilation
  - production
- Positronium
- Beta-rays
  - absorption
  - angular distribution
  - detection, measurement
  - effects
  - polarization
  - scattering
- Beta-ray spectra
  - conversion electrons
- Beta-ray spectrometers

Nucleons

- Nuclear forces
- Nucleons and antinucleons
  - scattering
  - scattering, nucleon—nucleon
  - interactions
  - antinucleons

Protons

- Protons and antiprotons
  - absorption
  - angular distribution
  - detection, measurement
  - effects
  - interactions
  - magnetic moment
  - polarization
  - production
  - scattering
  - scattering, proton—deuteron
  - scattering, proton—proton
  - antiprotons
- Proton spectra

Neutrons

- Neutrons and antineutrons
  - absorption
  - angular distribution
  - detection, measurement
  - diffusion
  - effects
  - interactions
  - moderation
  - polarization
  - production
  - reflection
  - refraction
  - scattering
  - scattering, proton—neutron
- Neutron diffraction
- Neutron spectra
- Neutron spectrometers

Mesons

- Atoms, mesic
- Mesons
  - absorption
  - capture
  - decay
  - decay observations
  - detection, measurement
  - effects
  - interactions
  - magnetic moment
  - mass
  - production
  - resonances
  - scattering
  - spin and parity
- Muonium
- Strange particles

Hyperons

- Hyperons
  - absorption
  - capture
  - decay
  - decay observations
  - detection, measurement
  - effects
  - interactions
  - magnetic moment
  - mass
  - production
  - resonances
  - scattering
  - spin and parity
- Hypernuclei
- Strange particles

Deuterons

- Deuterons
  - effects
  - interactions
  - photodisintegration
  - polarization
  - scattering

Tritons

- Tritons

Alpha-particles, He Nuclei

- Alpha-particles and He nuclei
- Alpha-rays
  - absorption
  - angular distribution
  - detection, measurement
  - effects
  - scattering
- Alpha-ray spectra
- Alpha-ray spectrometers

COSMIC RAYS

- Cosmic rays
  - absorption
  - apparatus
  - composition
  - alpha-particles
  - deuterons
  - electrons
  - mesons
- Cosmic rays
  - neutrons
  - photons
  - protons
  - effects and interactions
  - origin
  - primary
  - showers and bursts
  - variations

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- Beta-decay theory
- Gyromagnetic ratio
- Hypernuclei
- Mössbauer effect
- Nuclear decay theory
- Nuclear forces
- Nuclear magnetic resonance and relaxation
  - measurement
- Nuclear orientation
- Nuclear physics
- Nucleus
  - electric moment
  - energy levels
  - magnetic moment
  - models
  - size
  - spin and parity
  - theory

Energy Levels . Excited Nuclei

- Gamma-ray spectra
- Nuclear excitation
- Nuclear isomerism
- Nucleus
  - energy levels
  - models

NUCLEAR DECAY . RADIOACTIVITY

- Alpha-particles and He nuclei
- Alpha-ray spectra
- Alpha-ray spectrometers
- Alpha-rays
  - absorption
  - angular distribution
  - detection, measurement
  - effects
  - scattering
- Beta-decay theory
- Beta-ray spectra
  - conversion electrons
- Beta-ray spectrometers
- Beta-rays
  - absorption
  - angular distribution
  - detection, measurement
  - effects
  - polarization
  - scattering
- Biological effects of radiations
- Chemical effect of radiations
  - ionizing radiations
- Dosimetry
- Fallout
- Gamma-ray spectra
- Gamma-ray spectrometers
- Gamma-rays
  - absorption
  - angular distribution
  - detection, measurement
  - effects
  - internal conversion
  - scattering
- Nuclear decay theory
- Nuclear bombardment targets
- Physical effects of radiations
- Radiation monitoring
- Radiation protection
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- Radioactive tracers
- Radioactivity
  - artificial production
  - decay periods
  - decay schemes
  - electron capture
- Radioactivity measurement
  - apparatus
- Radiochemistry

NUCLEAR REACTIONS

- Alpha-rays
  - scattering
- Biological effects of radiations
- Chemical analysis
  - by nuclear reactions
- Chemical effects of radiations
  - ionizing radiations
- Collision processes
- Deuterons
  - scattering
- Electrons
  - scattering
- Gamma-rays
  - scattering
- Hyperons
  - scattering
- Mesons
  - scattering
- Neutrinos and antineutrinos
- Neutrons and antineutrons
  - scattering
- Nuclear excitation
- Nuclear forces
- Nuclear reactions
  - chemical effects
- Nuclear bombardment targets
- Nuclear reactions due to
  - alpha-rays
  - cosmic rays
  - deuterons
  - electrons
  - helium-3
  - mesons
  - neutrons
  - nuclei of $Z > 2$
  - photons
  - protons
  - tritons
- Nuclear spallation
- Nucleons and antinucleons
  - scattering
- Nucleus
  - electric moment
  - energy levels
  - magnetic moment
  - models
  - size
  - spin and parity
  - theory
- Photons
  - scattering
- Physical effects of radiations
- Protons and antiprotons
  - scattering
- Radiation monitoring
- Radiation protection
- Scattering, particles

Nuclear Fission

- Nuclear fission
  - products

Thermonuclear Reactions . Nuclear Fusion

- Nuclear fusion
- Thermonuclear reactions
- Plasma

NUCLEAR POWER STUDIES

- Biological effects of radiations
- Chemical analysis
  - by nuclear reactions
- Chemical effects of radiations
  - ionizing radiations
- Dosimetry
- Neutrons
  - absorption
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  - diffusion
  - effects
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  - production
  - reflection
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  - products
- Nuclear fusion
- Nuclear reactions
  - chemical effects
- Nuclear reactors, fission
  - materials
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- Nuclear reactors, fusion
- Physical effects of radiations
- Plasma
  - devices
- Radiation monitoring
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- Radiochemistry
- Thermonuclear reactions

ATOMIC AND MOLECULAR PHYSICS

- Atoms
- Collision processes
- Constants
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- Orbital calculation methods
- Quantum theory

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- Atoms
  - electron scattering
  - excitation
  - magnetic moment
  - structure
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- Atomic mass
- Atomic weight
- Collision processes
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  - origin
  - relative abundances
- Gyromagnetic ratio
- Ionization potential
- Luminescence
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- Optical pumping
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- Periodic system
- Photoelectric emission
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- Spectral line breadth
- Stark effect
- Zeeman effect

Isotopes

- Isotope effects
- Isotope exchanges
- Isotope separation
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- Radioactive dating
- Radioactive tracers
- Radiochemistry
- Tracers

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- Atoms, mesic

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- Molecules

Structure . Internal Mechanics

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- Bonds
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- Isomerism
- Luminescence
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    - inorganic
    - organic
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  - internal mechanics
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- Orbital calculation methods
- Raman spectra
  - inorganic
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  - inorganic molecules
    - diatomic
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  - inorganic liquids and solutions
  - inorganic solids
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- Spectral line breadth
- Stark effect
- Valency
- Zeeman effect

Mesic Molecules

- Molecules, mesic

Magnetic Resonances

- Magnetic resonance and relaxation
- Molecules
  - nuclear coupling
  - relaxation
- Nuclear magnetic resonance and relaxation
- Nuclear quadrupole resonance
- Paramagnetic resonance and relaxation

Dissociation . Free Radicals

- Free radicals
- Heat of dissociation
- Molecules
  - dissociation
  - dissociation energies

Intermolecular Mechanics

- Collision processes
- Molecular beams
- Molecules
  - intermolecular mechanics

Macromolecules . Polymers

- Association
- Heat of formation
- Isomerism
- Macromolecules
- Molecules
  - configuration and dimensions, macromolecules
- Polymers
- Proteins

SOLID-STATE PHYSICS

- Bonds
- Crystals
  - internal fields
- Crystal properties
- Equations of state
  - solids
- Metals
  - theory
- Mössbauer effect
- Nuclear orientation
- Orbital calculation methods
- Solids
  - structure
  - theory
- Surface energy
- Surface phenomena

LATTICE MECHANICS

- Crystals
  - lattice mechanics
- Mössbauer effect

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- Absorption
  - acoustic waves
  - acoustic waves, ultrasonic
- Acoustic wave propagation
  - ultrasonic
- Acoustoelectric effects
- Diffraction
  - acoustic waves
  - acoustic waves, ultrasonic
- Dispersion, acoustic
  - ultrasonic
- Magnetoacoustic effects
- Reflection
  - acoustic waves
  - acoustic waves, ultrasonic
- Refraction
  - acoustic waves
  - acoustic waves, ultrasonic
- Scattering
  - acoustic waves
  - acoustic waves, ultrasonic
- Transmission
  - acoustic waves
  - acoustic waves, ultrasonic
- Velocity
  - acoustic waves
  - acoustic waves, ultrasonic

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- Conductivity, thermal
  - solids
- Equations of state
  - solids
- Heat conduction
- Melting
- Melting point
- Specific heat
- Thermal expansion
- Thermodynamic properties

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- Crystal properties
- Crystals
  - electron states
  - excitons
  - internal fields
  - polarons
- Cyclotron resonance
- Electron beams
  - effects
- Electron gas
- Electron pairs
  - annihilation
- Electrons
  - scattering
  - absorption
  - radiation
- Hall effect
- Magnetoacoustic effects
- Metals
  - theory
- Piezoresistance
- Solids
  - theory
- Surface phenomena

DEFECT PROPERTIES

- Cold working
- Creep
- Crystals
- Crystal imperfections
  - dislocations
  - interstitials
  - vacancies
  - etching
  - twinning
- Crystal structure
- Elastic deformation
- Electron diffraction examination of materials
- Electron microscope examination of materials
- Heat treatment
- Internal friction
- Neutron diffraction examination of materials
- Plastic deformation
- Plastic flow
- Slip
- Stresses, internal
- Work hardening
- X-ray examination of materials
  - microstructure

Diffusion

- Diffusion in solids
- Permeability, mechanical

Colour Centres

- Absorption
  - light
- Colour centres
- X-rays
  - effects

Radiation Effects

- Acoustic waves
  - effects
- Alpha-rays
  - effects
- Beta-rays
  - effects
- Deuterons
  - effects
- Electron beams
  - effects
- Gamma-rays
  - effects
- Hyperons
  - effects
- Ion beams
  - effects
- Mesons
  - effects
- Neutrons
  - effects
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- Protons
  - effects
- Sputtering
- X-rays
  - effects

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Hall effect
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Semiconducting materials
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    indium antimonide
    silicon

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Thermoelectricity

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    mechanical
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Stark effect
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    light
Transparency
Velocity
    light
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Colour centres
Counters, scintillation
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Luminescence
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- Magnetic properties of substances
  - paramagnetic
- Paramagnetism

Ferromagnetic Properties

- Ferromagnetism
- Magnetic devices
- Magnetic properties of substances
  - ferromagnetic
- Magnetization process
- Magnetization state
  - domains

Ferrimagnetic Properties . Ferrites

- Ferrimagnetism
- Ferrites
- Magnetic properties of substs.
  - ferrimagnetic

Antiferromagnetic Properties

- Antiferromagnetism
- Magnetic properties of substs.
  - antiferromagnetic

MAGNETIC RESONANCES IN SOLIDS

- Antiferrimagnetic resonance
- Antiferromagnetic resonance
- Cyclotron resonance
- Ferrimagnetic resonance
- Ferromagnetic relaxation
- Ferromagnetic resonance
- Gyromagnetic effect
- Magnetic resonance and relaxation
- Magnetomechanical effects
- Masers
- Nuclear magnetic resonance and relaxation
  - measurement
- Nuclear quadrupole resonance
- Optical pumping
- Paramagnetic resonance and relaxation
  - measurement

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- Abrasion
- Adhesion
- Bending
- Brittleness
- Cold working
- Compressibility
- Corrosion
- Cracks
- Creep
- Density
  - solids
- Elastic constants
  - measurement
- Elastic deformation
- Elastic fatigue
- Elastic limit
- Elastic relaxation
- Elasticity
- Fracture
- Hardness
- Heat treatment
- High-pressure phenomena and effects
- Hysteresis
- Impact
- Internal friction
- Lubrication
- Magnetomechanical effects
- Mechanical properties of substs.
- Mechanical strength
  - compressive
  - shear
  - tensile
- Photoelasticity
- Physical effects of radiations
- Plastic deformation
- Plastic flow
- Plasticity
- Rheology
- Slip
- Strain gauges
- Stress analysis
- Stress effects
- Stress/strain relations
- Stresses, internal
- Thermoelasticity
- Thixotropy
- Torsion
- Viscoelasticity
- Wear
- Work hardening

STRUCTURE OF SOLIDS

- Crystal structure
- Density
  - solids
- Solids
  - structure
- Solid solutions
- Solubility

Solid-State Phase Transitions

- Phase equilibrium
- Phase transformations
- Precipitation

CRYSTALLOGRAPHY

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- Crystal properties
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  - lattice mechanics
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- Polymorphism
- Precipitation
- Solids
  - structure
- Surface texture
- Zone melting and refining

CRYSTAL LATTICE STRUCTURES

- Crystal structure, atomic
  - elements
  - alloys
  - inorganic compounds
  - organic compounds
- Electron diffraction crystallography
- Electron diffraction examination
- Electron microscope examination
- Neutron diffraction crystallography
- Neutron diffraction examination
- Polymers
- X-ray absorption
- X-ray crystallography
  - apparatus
  - calculation apparatus
  - calculation methods
  - technique
- X-ray diffraction
- X-ray examination of materials
  - microstructure
  - molecular structure
- X-ray measurement
- X-ray monochromators
- X-ray reflection
- X-ray scattering
- X-ray tubes

MICROSTRUCTURE

- Amorphous state
- Electron diffraction examination
- Electron microscope examination
- Electron microscopy
- Fibres
- Granular structure
- Ion microscopes
- Metallurgy
- Microscopy
- Neutron diffraction examination
- Particle size
- Powders
- Porous materials
- Radiography
- Surface texture
- X-ray examination of materials
  - microstructure
  - molecular structure

OTHER SOLID FORMS

- Fibres
- Filters
- Granular structure
- Membranes
- Particle size
- Permeability, mechanical
- Porous materials
- Powders
- Sintering

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- Surface energy
- Surface measurement
- Surface phenomena
- Surface texture
- Evaporation
- Films
    - solid
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- Sublimation
- Adsorption
- Adsorbed layers
- Heat of adsorption
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- Amorphous state
- Glass
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- Waxes

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- Atomic weight
- Balances
- Bonds
- Centrifuges
- Chemical structure
- Chemical technology
- Distillation
- Elements
    - origin
    - relative abundances
- Filters
- Isomerism
- Laboratory apparatus and technique
- Macromolecules
- Molecular weight
- Molecular weight determination
- Periodic system
- Physical chemistry
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- Corrosion
- Crystal chemistry
- Detonation
- Dissociation
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- Heat of adsorption
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- Heat of dissociation
- Heat of formation
- Heat of reaction
- Isotope exchanges
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- Phase transformations
- Polymerization
- Polymers
- Reaction kinetics
- Sorption
- Thermal transformations

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    - electrolytic
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- Dissociation
    - electrolytic
- Electrochemistry
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- Electrokinetic effects
- Electrolysis
- Electrolytic deposition
- Electrophoresis
- Ion velocity
    - electrolytic
- Ions, electrolytic

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- Chemical effects of radiations
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    - ionizing radiations
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- Centrifuges
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- Disperse systems
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- Solubility
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    - by mass spectrometry
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- Radioactive tracers
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- Tracers

GEOPHYSICS

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    - age
    - composition
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- Geodesy
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- Gravity
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- Seismic waves
- Seismology

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IONOSPHERE

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    - ionosphere
- Ionosphere
    - D-region
    - E-region
    - F-region
- Ionosphere measuring apparatus
- Ionization, atmosphere

GEOMAGNETISM

- Compasses
- Earth
    - magnetic field
    - magnetic field, variations
- Magnetic storms
- Magnetism
- Rock magnetism

ASTROPHYSICS

- Astronomical instruments
- Astronomical observations
- Astronomical spectra
- Astronomy and astrophysics
- Celestial mechanics
- Cosmic rays
- Cosmology
- Elements
    - origin
    - relative abundances
- Gravitation
- Interstellar matter
- Telescopes
    - astronomical

STARS . GALAXIES

- Galaxies
- Gravitation
- Interstellar matter
- Magnetohydrodynamics
- Nebulae
- Novae
- Stars
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    - magnetism
    - radiation
    - spectra
    - structure
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- Comets
- Cosmic rays
- Earth
    - rotation
- Gravitation
- Interplanetary magnetic field
- Interplanetary matter
- Meteorites
- Meteors
- Moon
- Planets
- Solar system
- Sun
    - corona
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    - prominences
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    - radiation
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- Radioastronomy
- Sun
    - radiation, r.f.

SPACE RESEARCH

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- Satellites, artificial
- Space research
- Space vehicles
    - instrumentation

BIOPHYSICS . PHYSIOLOGICAL PHYSICS

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  - acoustic waves
  - ionizing radiations
- Biological technique and instruments
- Biology
- Biophysics
- Blood
- Bone
- Dosimetry
- Medical science
- Physiology
- Proteins
- Radiation protection
- Radiography
- Zoology

HEARING . SPEECH

- Ear
- Hearing
- Noise
  - acoustic
- Speech

VISION

- Eye
- Vision
- Colour vision
- Stereoscopy

TECHNIQUE . MATERIALS

- Biological technique and instruments
- Chemical technology
- Laboratory apparatus and technique
- Leak detection
- Low-temperature technique
- Materials
- Metallurgy
- Vacuum technique
- Zone melting and refining

All the chemical elements are listed by name, followed by their compounds and alloys. Organic compounds are grouped under the headings "Organic compounds", "Polymers", "Plastics". In addition, there are also the following headings:

- Actinides
- Actinide compounds
- Alkali metals
- Alkali metal compounds
- Alkaline earth metals
- Alkaline earth compounds
- Alloys
- Ceramics
- Ferrites
- Ferroelectric materials
- Fibres
- Garnets
- Halogens
- Inert gases
- Metals
- Minerals
- Optical materials
- Porous materials
- Powders
- Proteins
- Rare earth metals
- Rare earth compounds
- Semiconductors
- Semiconducting materials
- Transition metals
- Transition metal compounds
- Waxes

as well as the following special substance headings:

- Air
- Blood
- Bone
- Clay
- Coal
- Concrete
- Deuterium
- Diamonds
- Gelatin
- Glass
- Graphite
- Ice
- Mica
- Ozone
- Paper
- Quartz
- Rochelle salt
- Rubber
- Sand
- Seawater
- Soil
- Steam
- Steel
- Tritium
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Abacs
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CdS, pure crystals at 4. 2°K 0=1744-5
CdS single crystals, at band edge 0=1724
CdS, single crystals, effect of high pressure of edge 2=2225
CdS, 10-300 cm^{-1}, in polarized light, rel. to exciton creation 0=13679
CdSb 1=2416
CdSb, semiconducting two forms 2=4033
CdSe 1=1151
$CdSnAs_2$, i.r. 1=8952
CdTe 0=10028
CdTe, coefft. meas., temp. depend. 3=23067
Ce glass, u.v. irradiated 1=14349
Co, films, oxidation and wavelength effects 3=17991
Co ions, crystal field splittings 2=3812
Co^{2+} ions in organic solvents 3=10923
Co^{2+} ions in soln. 4=2684
$CoBr_2 \cdot 6H_2O$, at low temps. 0=16051
$CoCl_2 \cdot 6H_2O$, at low temps. 0=16051
Cr, ionized, opacity calcs. 2=15651
Cr ions, crystal field splittings 2=3812
Cr^{3+} paramagnetic ions in soln. 2=5018
Cr^{3+} in ruby, polarized, for each ground sub-level 4=7123
in Cs, double–photon 3=6359
CsBr, by colour centres, 0.175-3.5 μ 1=992
CsBr, dispersion meas. in far i.r. 2=8537
CsBr, with excess Br 1=8990
CsCl, by colour centres, 0.175-3.5μ 1=992
CsI, by colour centres, 0.175-3.5 μ 1=992
CsI, with excess I, optical absorption 1=8990
CsI, far i.r., liquid He temps. 3=3006
Cs_3Sb films, band edge structure and excitons 4=10166
Cu, absorptivity in near i. r. 0=1719
Cu covered with LiF film, extinction coeff. in far u. v., meas. 4=28677
Cu, films, anomalies due to granular struct. 4=1715
Cu, films, 4-20 mμ, anomaly 3=17996
Cu, films, oxidation and wavelength effects 3=17991
Cu halides, at low temps. 0=10029
CuCl films, thickness var. anomaly near band 4=28681
Cu-Ge alloys, 0.23-4 μ, at 4.2°K 1=1156
CuI, anomalies at critical thickness 2=689
by Cu_2O crystal, exciton theory 1=3827
Cu_2O, exciton–phonon spectrum 2=10581, 14659
Cu_2O films, and exciton formation 3=13170
Cu_2O, impurity centres, rel. to photoelec. props. 4=7066
Cu_2O, rel. to photoelectric spectral distribution 1=12457
Cu_2O single crystals, optical anisotropy 0=13680
Cu_2O, at 16510-16900 cm^{-1}, 4.2-295°K 1=2441
Cu_2O, spatial anisotropy, rel. to exciton states 1=17876
Cu_2O, spatial anisotropy, rel. to exciton states 1=19967
Cu_2O, thickness 10–180μ 2=4145
Cu_2O, visible, temp. depend. 0=643
D_2, cross-section, 580-1000A 4=28190
Fe films 2=11488
Fe, films, oxidation and wavelength effects 3=17991
Fe(III) in light and heavy water, molar coefft. 2=13344
$FeAl_2O_4$–$MgAl_2O_4$ mixed crystals 4=20514
Ga, liq., index in visible and near i. r. 4=24213
Ga, polycryst., coeff., 4000-8000 A 4=26189
Ga, for three axes, 0.4-8.0 μ meas. 4=7134
GaAs, absorption edge rel. to temp. 1=19970
GaAs, degenerate p-type, i.r. absorpt. edge 2=8528
GaAs, and electron effective mass, Fermi energy 3=23070
GaAs, i. r., and high-temp. Hall coeff. 0=9973
GaAs, i.r., rel. to energy bands 2=8495
GaAs, laser-type, determ. of coeffts. 4=13035
GaAs, lattice absorption, 10-40μ, 20° – 292° K 1=17898
GaAs, n-type, far i.r. cyclotron resonance 1=17490
GaAs, 0. 6–2. 75 eV and 10–300°K 2=18806
GaAs, optical transitions involving impurities 4=6776
GaAs thin films, absorpt. edge shifts 4=23579
GaAs, var. due to optical excitation, with view to laser prod. 4=28688
GaP, 1-40μ 0=10042-3
GaS, absorpt. edge 3=10946
GaSb, i.r., effect of carriers 1=17733

Absorption—contd
- **light**—contd
  - Ge 0=8005
  - Ge 4=12895
  - Ge, As-doped degenerate, rel. to energy gap 2=12587
  - Ge, coeff. 2=16810
  - Ge, compensated heavily doped, meas. 3=2988
  - Ge, degenerate, As-doped 0=13683
  - Ge, doped, direct lattice absorption 3=928
  - Ge films 0=20897
  - Ge, Au-doped, i.r. 0=6140
  - Ge at high electric field, microwave 2=2199
  - Ge, highly-doped, i.r. absorpt. 4=26191
  - Ge, highly doped, i.r. meas. 3=15679
  - Ge, indirect absorption, energy dependence, calc. 2=18804
  - Ge infrared 1=19994
  - Ge, infrared modulation, by free carrier absorption 4=15589
  - Ge, i.r., oxygen doped 2=14534
  - Ge, interband transitions, effect of elec. field 1=14580
  - Ge monocrystalline, 290-550°K 0=16045
  - Ge, n-type, impurity scatt., calc. 1=3826
  - Ge, optical absorpt. edge broadening 2=16829
  - Ge p—n junction, edge shift by elec. field for modulation 4=26193
  - Ge, 16.6-27.4 eV 1=8978
  - Ge, by surface states 3=25251
  - Ge thin films, u.v. 3=2995
  - Ge, up to 2.5 eV beyond first edge 4=22860
  - GeSe, rel. to photocond. 2=8520
  - H, circ. polarized Rb radiation, hyperfine splitting 2=18407
  - H, i. r., induced, ternary coeff. calc. 0=7748
  - H quasi-molecules 0=15741
  - H^-, bound-free absorption coeff. 3=2557
  - H^- free-free absorpt. coeff. 4=25563
  - H_2, cross-section, 580-1000A 4=28190
  - H_2, quasi-molecular, in stellar atmospheres, absorpt. coeff. 4=23868
  - HBr, rotational transitions, spectral coeffs. 2=20791
  - HCO radical detection 0=5930
  - HCl gas, i.r., up to 1200°K 3=16661
  - HCl, i. r. in vibration–rotational bands 0=9793-4
  - HCl, rotational transitions, spectral coeffs. 2=20791
  - HF, rotational transitions, spectral coeffs. 2=20791
  - H_2O, absorpt. cross-section 4=28218
  - H_2O vapour, total absorptance in near i.r. 3=23933
  - H_2S, absorpt. cross-section 4=28218
  - He atoms, continuous photoelec. absorption cross-section 2=529
  - Hg arc, rel. to spectral line contours 2=7366
  - Hg, liq., index in visible and near i. r. 4=24213
  - Hg, superconducting, apparent structure on far i. r. energy gap 0=1083
  - Hg, superconducting, far-i. r., energy gap meas. 0=14933
  - Hg, superconducting, i. r., theory 0=10842
  - Hg vapour, and mixed with air, optico-acoustic effect 0=19214
  - $Hg[Cd]Te—In_2[Ga_2]Te_3$, solid solutions 3=11301
  - HgI_2, effect of high elec. field 2=10583
  - HgS, black, i.r. absorption edge 2=18840
  - HgSe, absorption edge rel. to carrier concentration 1=17754
  - HgSe–HgTe, absorption edge rel. to carrier concentration 1=17754
  - HgSe, HgTe, i.r., direct energy rap 2=10608
  - HgTe—CdTe, meas. near fundamental edge 4=13048
  - Ho^{3+} in crystalline salts, u.v. absorpt. 3=3008
  - In, superconducting, far-i. r., energy gap meas. 0=14933
  - InAs, absorption edge 0=16057
  - InAs, at liquid H temp. 3=6339
  - InAs, n-type, i.r., rel. to scatt. mech. 4=20461
  - InAs, n-type, near fundamental edge, rel. to impurities 1=12487
  - InAs, var. due to optical excitation, with view to laser prod. 4=28688
  - $2InAs.3In_2Se_3$, absorption edge 0=16057
  - $4InAs.In_2Se_3$, absorption edge 0=16057
  - $InAs–In_2Se_3$, i.r. 1=19881
  - $InAs.In_2Te_3$, absorption edge 0=16057
  - $InAs.3In_2Te_3$, absorption edge 0=16057
  - $InAs–In_2Te_3$, infrared 1=19880
  - $In(As_yP_{1-y})$, rel. to semicond. props. 0=1717
  - InP_xAs_{1-x} 4=4017
  - In_2S_3, rel. to vacancy ordering, 420° C 4=13489

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- **light**—contd
  - InSb, coeff., visible and near-u.v. regions 4=1734
  - InSb, free carrier and interband, magneto-opt. oscill. 3=10917
  - InSb, i.r. absorpt. of free carriers 2=8536
  - InSb, i.r. cyclotron resonance in n-type 1=7572
  - InSb, i.r., by free-carriers 3=23071
  - InSb, i. r., at low-temp., n- and p-type 0=13684
  - InSb, var. due to optical excitation, with view to laser prod. 4=28688
  - $InSb–In_2Se_3$, i.r. 1=19881
  - In_2Se_3, absorption edge 0=16057
  - $In_2Te_3—CdTe$, optical energy gap 1=20621
  - $In_2Te_3—ZnTe$, optical energy gap 1=20621
  - K, internal photoelec. effect, meas. 3=17976
  - K, peak, new collective electron state and coherent pairing of the second kind explanations 4=26210-11
  - K, in u. v., from transmission meas. 0=16034
  - KBr 0=628
  - KBr, additively coloured, rel. to electron absorption 1=11189
  - KBr, with anionic impurities 3=25464
  - KBr, M-band, temporary bleaching 4=20317
  - KBr, rel. to fast electron irrad. 4=1651
  - KBr, strained, pure or Tl doped 3=18054
  - KBr, structure vibs., sp. ht. meas. 3=12926
  - KCl 0=628
  - KCl crystals, effect of exposure to u. v. light 4=26760
  - KCl, F-centre and Tl^+, band shape meas. 4=12809
  - KCl, F-centre, 200-1000 mμ, X-ray coloration and optical bleaching, light intensity depend. 0=15861-2
  - KCl, F-centres, after opt. and thermal bleaching 2=3963
  - KCl, F—F′ centres photoequilibrium, kinetic model 2=12470
  - KCl, F ⇌ F′ reaction and F′ lifetime study 3=2840
  - KCl, fundamental absorption tail rel. to temp. and Br content 2=8517
  - KCl fundamental and Br-induced rel. to temp. 1=14582
  - KCl, heavily γ-irrad., F- and M- band absorption 3=816
  - KCl, i. r., lattice dispersion freq. at 82°K 0=13665
  - KCl, M-band, temporary bleaching 4=20317
  - KCl, by M-centres 1=17581
  - KCl, optical bleaching near 0°C, temp. depend. 0=11633
  - KCl, polarized F-light, A and B-colour centres 2=607
  - KCl, pure and additively coloured, rel. to electron absorption 1=11189
  - KCl, shape of F-band absorption 0=6180
  - KCl, shape, due to localized excitons 4=7097
  - KCl strained, pure or Tl doped 3=18054
  - KCl, V_3-centres, prod. by X-ray irrad. 1=17583
  - KCl : Ag, X-irrad., trapped holes and electrons 3=5044
  - KCl–KBr mixed crystals, u.v., defect props. 2=3912
  - KCl—KBr mixed system, u.v. absorption 1=8989
  - $KCl:Co^{2+}$ and $:Ni^{2+}$, meas. 3=10923
  - KCl:I, oscillator strength of I^- band 1=19981
  - KCl, NaCl-doped, band due to colloidal K—Na alloy 1=17585
  - KCl : Sr, Z_1- centres absorption, e.s.r. 3=25304
  - $K_3|Cr(CN)_5NO|.H_2O$ 1=3566
  - K_2CrO_3, solutions, extinction coefficient 2=11374
  - KD_2PO_4 3=17943
  - KH_2PO_4, i.r. 3=20384
  - KI diluted in KCl, u.v. absorption 2=8524
  - KI strained, pure or Tl doped 3=18054
  - $KMg(Ni)F_3$, coincidence with fluorescence 3=19993
  - Kr, cross-section and f value in ionization limit 4=19958
  - La, superconducting, far i. r. meas., gap width 4=14522
  - $LaAlO_3$, doped with transition element ions 4=16383
  - LaB_6, and semicond. 3=20437
  - Li, photoelectric K-absorption cross-section 3=704
  - LiF, coloured, i. r. absorption, phonon-free transitions 4=17573
  - LiF, coloured, sharp absorpt. lines 3=814
  - LiF crystals, α- and X-irradiated 4=26206
  - LiF crystals, neutron irrad. 2=2108
  - LiF, extreme u.v. 2=8523
  - LiF, 450 mμ, rel. to γ-ray induced expansion 4=4099
  - LiF, in i. r. 0=6182
  - LiF, i.r., theory 3=15684
  - LiF, irradiated, u.v. absorption 1=14584
  - LiF, piezospectroscopic effect 2=16847
  - LiF, rel. to colour centres 3=22836
  - LiF, self-trapped hole, energy and width 4=17453

- **Absorption**—contd
  - **light**—contd
    - LiF, 300–900μ meas. 2=18813
    - LiF, vacuum u.v., β-irradiated, effect of bleaching in F-light and immersion in water 3=13178
    - LiH, colour centres 1=17578
    - Mg, extinction coeff. calc. on basis of free electron theory 4=13019
    - MgF_2 films, in far u.v. 0=7994
    - Mg_2Ge, i.r. 4=26207
    - MgO, i.r. theory 3=15684
    - MgO particles, rel. to wavelength 3=924
    - MoS_2, thin crystals 3=10957
    - $MoTe_2$, absorpt. edge, bands, observation 3=25466
    - N, high temp. 0=7120
    - N, modulated u.v., acoustic wave generation 0=8715
    - N_2, cross-sections at 600-1000A 4=25662
    - N_2O_3 i.r. transmittance 1=14568
    - NH_2 free radicals 3=8308
    - NO, γ-bands at 2000°K, spectral coeffts. 3=2606
    - NO, rotational transitions, spectral coeffs. 2=20791
    - NO_3^- ion in soln., u.v. 300 mμ band 3=1689
    - N_2O, gaseous absorptance in i.r. 2=19619
    - N_2O, total absorptance near 4.5μ 3=14217
    - Na absorpt., 2400-1000A 4=28137
    - Na, 2400-1000A, atomic 4=28137
    - Na, in u.v., from transmission meas. 0=16034
    - NaCl 0=628
    - NaCl, coloured, with Cd, Na addns., u.v. absorpt. 3=813
    - NaCl crystals, u.v. absorpt. 3=929
    - NaCl, F-centres 2=8254
    - NaCl, i.r., lattice dispersion freq. at 82°K 0=13665
    - NaCl, 1-3mm, temp. depend. meas. 4=10195
    - NaCl, shape of F band absorption 1=10017
    - NaCl-type ionic crystals, i.r. anharmonic potential effect 4=1751
    - NaCl, Ca impurity, F and Z centres 2=6390
    - NaCl, effect of Cd impurity 1=17877
    - $NaCl:Co^{2+}$ and $:Ni^{2+}$, meas. 3=10923
    - NaCl : Pb, thermal treatment, X-irradn. effect 3=940
    - Na—H (active) flame, self, chemiluminescence 4=23654
    - NaH, F-centres 2=3962
    - in NaN_3 by vacancy colour centres 1=17579
    - $NaNO_2$, i.r., polarized, phase transition study 2=2238
    - Nb, superconducting, far-i.r., energy gap meas. 0=14933
    - Nb_2O_5, anodic oxide films 0=18411
    - $Nd(NO_3)_3.6H_2O$, far i.r., liquid He temps. 3=3006
    - Ne, solid, by A impurity, calc. 1=19747
    - Ni, evap. films, absorption meas. 2=23514
    - Ni films 2=11488
    - Ni, films, oxidation and wavelength effects 3=17991
    - Ni ions, crystal field splittings 2=3812
    - Ni^{2+} ions in organic solvents 3=10923
    - Ni^{++} ions in soln. 1=12882
    - No, vibr. relaxation, study 2=2769
    - O, high temp. 0=7120
    - O, modulated u.v., acoustic wave generation 0=8715
    - O, 1060-580 A, rel. to dissociation and ionization 4=9723
    - O_2, cross-sections at 600-1000A 4=25662
    - O_2, solid, at 1550 cm^{-1} 3=3010
    - O_2 under pressure, microwave absorption 0=5915-16
    - O_2, in u.v., meas. rel. to atmospheric ozone layer 2=8106
    - O_3, Hartley band extinction coeff., as gas and in liquid N_2, CO, Ar 4=18200
    - O_3, 2537–5770 A 2=542
    - OH, rotational transitions, spectral coeffs. 2=20791
    - P, black, crystalline, absorption edge 3=17891
    - POH group, i.r. absorpt. bands 2=16531
    - Pb alloys, supercond., far i.r., and sharp edge gap, 4=24505
    - Pb carbonate, nitrate, i.r. 2=8531
    - Pb halides, i.r. meas. 2=10568
    - Pb, superconducting, apparent structure, on far i.r. energy gap 0=1083
    - Pb, superconducting, far-i.r., energy gap meas. 0=14933
    - Pb, superconducting i.r., theory 0=10842
    - $PbCl_2$ thin films 1=14583
    - PbI, exciton absorption 2=8518
    - PbI_2, anomalies at critical thickness 2=689
    - PbI_2, effect of high elec. field 2=10583
    - PbI_2, extinction coeff. 4=26202
    - PbS, 0.5-6.0 eV meas. 4=13042
    - n–PbS–p–PbO films, in Resistron charge-storage tubes, wavelength, temp. var. 3=25419

- **Absorption**—contd
  - **light**—contd
    - PbSe, 0.5-6.0 eV meas. 4=13042
    - PbTe, 0.5-6.0 eV meas. 4=13042
    - Pb–Tl alloy, supercond., far i.r. 2=7511
    - S, rhombic, i.r. 3=3021
    - SO_2, vac. u.v. 2=6179
    - Sb, i.r., rel. to electric carriers 3=4970
    - Se, absorption edge of hexagonal crystals 4=10190
    - Se thin films, u.v. 3=2995
    - Se, under v. high press., optical gap 3=17812
    - Si, beyond band edge, review 4=28413
    - Si, doped, direct lattice absorption 3=928
    - Si, effect of I in small amounts 0=20986
    - Si, effect of strong elec. field 1=1153
    - Si, far i.r., from transmission meas., for p-type 4=4273
    - Si, heat treated, 9.6μ, band 2=8539
    - Si, impurities, lattice vibrations 3=10581
    - Si, impurity absorption, variational calc. 0=13685
    - Si infrared 1=19994
    - Si, i.r., rel. to neutron irrad. 2=8396
    - Si, intrinsic absorption, heavy doping effect 3=15688
    - Si, neutron irradiated, i.r. coeff. 0=651
    - Si oxide film, thermally oxidized, 9μ, decrease on γ-irradiation 3=13189
    - Si, radiation field interaction with lattice vibr. at critical points of Brillouin zone 4=22895
    - Si, S–doped, i.r. 2=18846
    - Si thin films, u.v. 3=2995
    - Si, Zn-doped, 1-5μ, 90° and 290°K 4=10193
    - SiC, α, by free carriers, mechanism 2=2240
    - α-SiC, n-type, 80°-8000°K 4=26220
    - SiO films, effect of evaporation rate 3=20486
    - SiO_2 (coesite), 5–22μ 2=4130
    - Sm^{2+} ions, in alkaline earth fluoride crystals 2=21242
    - Sn, superconducting, far-i.r., energy gap meas. 0=14933
    - SnI_4, under v. high press., optical gap 3=17812
    - SnO_2 films, semiconducting, near i.r. 4=1755
    - SnO_2, i.r. absorption, effect of illumination with u.v. 0=18118
    - SnO_2, rel. to crystal structure 3=2924
    - SnS, absorption edge rel. to conduction bands 1=17759
    - SnTe, 0.5-6.0 eV meas. 4=13042
    - Sr, Ba, Pb nitrates, i.r. spectra 2=6580
    - SrF_2, colour centres 2=3958
    - SrF_2, coloured and uncoloured, geometric model 2=3957
    - SrF_2, single crystals, coloration 1=19808
    - $SrTiO_3$, doped with transition element ions 4=26383
    - T, circ. polarized Rb radiation, hyperfine splitting 2=18407
    - Ta oxide, anodic films 2=698
    - Ta, superconducting, far-i.r., energy gap meas. 0=14933
    - Tb^{3+} ions, in crystalline salts 2=6574
    - Te films, in vacuo, 2-13 eV 4=1754
    - Te, intrinsic, of polarized light 2=18805
    - Te, polycryst., i.r. meas. 3=13151
    - Te thin films, u.v. 3=2995
    - Ti, coeff., in quantum-transitions range 4=15601
    - Ti, ionized, opacity calc. 2=15651
    - TiO_2, absorption centres, elec. and optical study 0=13552
    - TiO_2, pressure effect 0=4405
    - TlCl, wavelength depend. 3=3023
    - TlCl—KCl thin films 1=14583
    - V, superconducting, far-i.r., energy gap meas. 0=14933
    - WO_3, absorption edge, temp. dependence 1=12486
    - WO_3, i.r. absorption, effect of illumination with u.v. 6=18118
    - WSe_2, absorpt. edge, bands, observation 3=25466
    - Xe, cross-section and f value in ionization limit 4=19958
    - Xe discharge column 0=9011
    - Xe plasma, vac u.v., as probe method 4=14686
    - Xe plasma, vac u.v., as probe 4=14687
    - Yb^{3+} ion in CdF_2, i.r. 2=14826, 18948
    - Zn crystals, 0.6-5 eV meas. 4=20450
    - Zn telluride, i.r. absorpt. edge 2=8529
    - $ZnAs_2$ 1=2416
    - Zn_3As_2 1=2416
    - $ZnIn_2S_4$ single crystals 4=28713
    - ZnO, and crystal struct. 4=22725
    - ZnO, i.r., calc. 1=14607
    - ZnO in i.r. region 0=654, 2945
    - ZnO, polarized light, 20° to 200° K 1=17477
    - ZnP_2, red and black forms 3=16072
    - ZnS, edge shift under electric field 1=19988
    - ZnS, evap., u.v. meas. 3=926
    - ZnS, spectra 220-600 mμ 0=10048

Absorption—contd
- **light**—contd
  - ZnS (wurtzite)-type crystals, i.r., by electrons due to piezoelec. scatt., calc. 1=14606
  - ZnSb 1=2416
  - ZnSe, opt. and photoelec. props. 400-800 mμ 0=13671
  - ZnTe, opt. and photoelec. props. 400-800 mμ 0=13671
  - Zr anodic oxide films 0=4412

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- See Elements, relative abundances; Isotopes, relative abundances.

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- See also Dynamics; Kinematics. (Heading removed in 1963)
- braking, with uniform deceleration, theory 0=8820
- stop-light dilemma 2=7159
- uniform, in special relativity, definition 1=15623

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- acceleration carts and track 1=5247
- accelerometer BaTiO$_3$ 0=19040
- accelerometer quartz, development and calibration 0=16663
- accelerometer sensing elements, high temp. 2=14618
- accelerometers, capacitive with optimum freq. response characteristics 1=2813
- accelerometers, high-frequency limitations 1=10469
- apparent mass of object moving through liq. He II 0=8905
- calibration, interferometric, oscillating, optimum conditions 4=2847
- g, absolutemeas. at Ottawa 0=10628
- Hall effect spring system 3=21287
- linear air trough, modification 3=1646
- piezoelectric accelerometers, sensitivity to orientation 1=11733
- piezoelectric, 1.5-150 kc/s 4=29507
- piezoelectric pickups, upper frequency limit 4=5009
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- See individual compounds.

Acids, organic
- See Organic compounds.

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- amplitude distribution, using analogue computer 2=5099
- bagpipe sounds 3=23988
- beats, apparatus making them audible and visible 1=11817
- cochlea model, frequency, deviations from Ohm's law 2=7053
- complex signal detection by human ear 1=15370
- complex sounds, three-tone, rel. to loudness 2=5104
- computer recognition of spoken digits 4=10946
- ear, into freq. groups, rel. to masking threshold 2=15425
- echo amplitude 1=1793
- "exploring tones" 0=6508
- field representation, optical 3=18908
- 50 c/s-3.3 kc/s spectrum analysis 1=5334
- filters, bandpass, errors 3=227
- flanged circular pipe, acoustic radiation from end 1=9446
- four-directional receiver correlators, comparison analysis 1=8198
- Fourier series for wave in dissipationless medium 0=6881
- Gaussian-filter spectrum analyser 3=11870
- grand pianos, transient phenomena and reverberation 2=2838
- hydrophase, standard calibration 0=1007
- integrator for spectra 3=18937
- intonation 1=7952
- loudness level, determ. using time function and spectral profile 2=78
- musical scales, various, deviations from equal-tempered scale 0=10739
- noise, jet aircraft, automatic processing system 1=2828
- noise, random, short-duration 3=14285
- phonetic typewriter, model III 1=18527
- pitch extractor, for fundamental frequency 4=4966
- pitch of high-pass-filtered pulse trains, ear effect 4=20971
- plane-wave sources, two, directional localization of sound 4=26992
- plate clamped in fluid, under forced vibrations 0=19247
- point radiator field in inhomogeneous medium 2=2819, 7288
- radiation by arbitrary shell in infinite fluid 4=2778
- ray path calc., variational method 4=14279
- sawtooth waves, front-width determination 0=19309
- shock waves in liquids, e. m. produced, meas. 4=24300

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- signal detect., stimulus-oriented approach 4=20972
- singing voice, vibrato, and choir singing 0=6496
- sonic stationary wave, press. and tem. depend. 0=5100
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$B^{11}(p, \alpha)Be^{8*}$ 0=438-9
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$Be^9(d,\alpha)Li^7$, 13.6 MeV, for ground and excited states of Li^7 3=22425
$Be^9(He^3, \alpha)Be^8$, heavy particle stripping 3=19882
$Be^9(He^3,\alpha)Be^8$, 2.0 MeV 3=22269
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$Bi^{209}(d, \alpha)$ Pb^{207}, direct interact. mechanism 2=20668
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$C^{12} + C^{12}$, 123 MeV 3=17500
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$C^{12}(C^{12}\ \alpha)$ Ne^{20}, $\alpha-\gamma$ ang. correl. 2=3623
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$C^{12}(C^{12}, \alpha)$ Ne^{20} at 16.6 MeV 2=1809
$C^{12}(d, \alpha)$ B^{10} 2=3609
$C^{12}(d,\alpha)B^{10}$ 3=8124
$C^{12}(d,\alpha)B^{10}$, 15-20 MeV 3=22418
$C^{12}(\gamma,3\alpha)$, below 21.5 MeV 4=12203
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$C^{12}(He^3, \alpha)C^{11}$ 2=3612
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$C^{12}[Mg^{24}]$ $(\alpha, \alpha'\gamma)$, $\alpha-\gamma$ correl., rel. to nuclear polarization 4=28062
$C^{12}(p,\alpha)B^9$, at 15.6 and 18.6 MeV 3=2454
$C^{12}(p, p^1 3\alpha)$ 0=9625
$C^{12}(t, \alpha)B^{11}$, spins, parities of B^{11} 2=18232
$C^{12}(t, \alpha)B^{11}$ at 0.8-2 MeV 2=3631
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$C^{13}(d, \alpha)$ B^{11} at 3·26 and 3·45 MeV 1=19504
$C^{13}(He^3,\alpha\gamma)C^{12}$, $\alpha-\gamma$ ang. correls. 3=2496
$C^{14}(p, \alpha)$ B^{11}, at 18 MeV 3=671
Cf^{249} decay, rel. to temp. 3=4608
Cm^{243}, $\alpha-\gamma$ ang. correl., perturb. by environment 3=4607
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$Co^{57}(p,\alpha)Fe^{56}$, 7.7-14.1 MeV 1=11012
$Co^{59}(n,\alpha)Mn^{56}$, 14 MeV neutrons 3=6264
$Co^{59}(p, \alpha)$ at 18 MeV 1=19462
$Co^{59}(p, \alpha)Fe^{56}$ 2=10099
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$F^{19}(d,\alpha_0)O^{17}$ (gnd) 1=11029
$F^{19}(d,\alpha_1)O^{17*}$ (0.872 MeV state) 1=11029
$F^{19}(p, \alpha)O^{16}$ 0=20443
$F^{19}(p, \alpha)O^{16}$ 2=3572, 7980
$F^{19}(p,\alpha)O^{16}$ 3=6244
$F^{19}(p, \alpha_0)O^{16}$, and Ne^{20} levels 4=25397
$F^{19}(p,\alpha)O^{16}$, $E_p < 35$ MeV, peaks near 180° 3=17459
$F^{19}(p, \alpha\gamma)O^{16}$, resonances 2=5910
$F^{19}(p,\alpha_0)O^{16}$, 3-12 MeV meas. 3=22379
$F^{19}(p,\alpha)$ O^{16}, at 5·1–6·5 MeV, α ang. distrib. 1=19468
$F^{54,56-8}(He^3, \alpha)$ at 14.3 MeV, expt. and calc. 2=18359
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Fe^{59}, $\gamma-\gamma$ ang. correl. and coincidence 0=11378
$Fe^{56}(p, \alpha)$ at 18 MeV 1=19462
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(He^3, α) reactions in B^{11}, B^{10}, N^{14}, O^{16}, Al^{27} 0=11422
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He^4, elastic scatt. at 6.4-7.8 MeV 1=2107
$In(n,\alpha)Ag$ 3=2475
$K^{39}(p, \alpha)A^{36}$ at 6.9 to 7.3 MeV 2=5913
Li^6 scatt., 23.8 MeV 4=17193
$Li^6(d, \alpha)He^4$, 1-2.5 MeV 4=3690
$Li^6 + Li^6 \rightarrow Be^8 + \alpha$ 3=6299
$Li^6(Li^6,\alpha)Be^8$, 1-2 MeV 4=22216
$Li^6(Li^6,\alpha)Be^{8*}$; $Be^{8*} \rightarrow 2\alpha$ 4=22218
$Li^6(p,\alpha)He^3$, up to 5 MeV 3=17460
$Li^{6,7}(N^{14}, \alpha)O^{16,17}$, α ang. distrib. 4=28068
$Li^7(p, \alpha)$ α at 4.8 MeV 2=16408
$Li^7(p, \alpha)He^4$ 4=6335
$Li^7(p,\alpha)He^4$, at 15 and 18.6 MeV 3=2454
$Li^7(p, \alpha)He^4$ at 1.12 to 3.58 MeV 2=20624
$Li^7(p,\alpha)He^4$, 1·12 to 3.58 MeV 3=8099
$Li^7(p,\alpha)He^4$, 3.0 to 5.5 MeV 3=17461
$Li^7(p, \alpha)He^4$ at 3.3 to 6.6 MeV 2=10100
$Li^7(p,\alpha)He^4$, 3·3-6·6 MeV 3=6245
$Li^7(t, \alpha)$ He^6, 1–2 MeV 1=19530
Li^8, $\beta-\alpha$ ang. correl. 0=5692
Li^8, $\beta-\alpha$ ang. correl. 0=13197
Li^8, $\beta-\alpha$ ang. correl., rel. to B^8 1=639
Li^8, $\beta-\alpha$ ang. correl., rel. to B^8 2=3508
Mg^{24}, fourth excited state, 22.5 MeV 3=15229
$Mg^{24}(He^3,\alpha)Mg^{23}$, 5.5 MeV 1=9885
$Mg^{26}(p,\alpha)Na^{23}$ 3=17467
$Mn^{55}(n,\alpha)$ at 14 MeV 3=6265
$Mn^{55}(p, \alpha)Cr^{52}$ 2=10099
$Mn^{55}(p,\alpha)Cr^{52}$, 7.6-12.9 MeV 1=11012
$Mn^{55}(p, \alpha)$ at 18 MeV 1=19462
$Mo^{92}(n, \alpha_0)$, 15 MeV 4=25411
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N^{14}, scatt. at 19.2 MeV, fitting by Blair black-nucleus diffraction model 1=8775
$N^{14}(\gamma,\alpha)B^{10}$, 21.5 MeV 4=22114
$N^{14}(d, \alpha)C^{12}$ 2=3609
$N^{14}(d, \alpha)C^{12}$, rel. to deuteron energy 1.5-3.0 MeV 1=17146
$N^{14}(d, \alpha)C^{12}$, resonance obs. 2=490
$N^{14}(d,\alpha_0)C^{12}$ (gnd) 1=11029
$N^{14}(d,\alpha_1)C^{12*}$(4.44 MeV state) 1=11029
$N^{14}-O^{16}$ reaction at 27·2 MeV 1=19535
$N^{15}(p, \alpha_0)O^{16}$ 0=7561
$N^{14}(t, \alpha)C^{13}$ at 1.8–2.6 MeV 2=20680
$Na^{23}(n,\alpha)$ at 14 MeV 3=6265
$Na^{23}(n, \alpha)F^{20}$ rel. to evaporation theory 2=16418
$Na^{23}(N^{14}, \alpha p)P^{32}$, $Na^{23}(N^{14}, \alpha 2p)Si^{31}$, rel. to compound
$Na^{23}(p,\alpha)Ne^{20}$, 3-12 MeV 3=19849
$Na^{23}(p, \alpha)Ne^{20}$ at 6.9 to 7.3 MeV 2=5913
$Nb^{93}(n,\alpha)Y^{90}$, 14 MeV 4=22155
Ne^{20} $(d, \alpha)F^{18}$ at 14.7 MeV 2=16424
Ni region, inelastic scattering at 43 MeV 2=1924
Ni + O^{16}, at 160 MeV, compound nucleus evaporation 1=734
Ni^{58}, inelastic scattering 1=9883
$Ni^{58,60,64}$. inelastic scattering 1=13853
$Ni^{58}(p, \alpha)$ at 18 MeV 1=19462
$Ni^{58,60}$ (p, α) Co 3=24934
$Ni^{60}(p, \alpha)$ at 18 MeV 1=19462

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angular distribution—contd
Ni^{62,64} scattering, inelastic, 44 MeV, core-particle interact. 4=17194
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Np^{237}, oriented in cooled NpO$_2$. Rb(NO$_3$)$_3$ 2=393
O^{16}, 15 to 22.7 MeV backward scatt. 3=2494
O^{16}(γ,α)C^{12}, 21.5 MeV 4=22114
O^{16}(γ,4α), 21.5 MeV 4=22114
O^{16}(d, α)N^{14} 2=3609
O^{16}(d,α)N^{14} 3=8124
O^{16}(d,α_0)N^{14} 1=11029
O^{16}(d,α)N^{14}, 6.6 MeV 4=22172
O^{16}(d, α)N^{14} at 15 MeV 2=8007
O^{16}(d.α)N^{14}. 15-20 MeV 3=22418
O^{16}(He^3, α)O^{15} 0=7578
O^{16}(He^3, α)O^{15}, rel. to reaction mechanism 0=5756
O^{16}(n, α)C^{13}, 6 and 8 MeV, direct interaction calc. 4=1087
O^{16}(n,α)C^{13}, at 14.4 MeV, thin crystal method 1=2225
from O^{16}(p, α)N^{13} reaction 1=17100
O^{18} (p, α_0) N^{15}, 730-1050 keV 3=24932
O^{18}(p, α)N^{15}, at 2.6-3 MeV 0=9632
P^{31}(d,α)Si^{29} (gnd.) 1=11029
P^{31}(d, α)Si^{29} at 14.7 MeV 2=16424
P^{31}(p, α) Si^{28} 2=3572
Pb^{208}(d, α)Tl^{206}, direct interact. mechanism 2=20668
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Rh^{103} (p, α) Ru^{100}, 8-14 MeV 3=24935
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S^{32}(d, α)P^{30} at 14.7 MeV 2=16424
Sc^{45}(p, α) at 18MeV 1=19462
Si^{28}, fourth excited state, 22.5 MeV 3=15229
Si^{28}(d, α)Al^{26} anomalies on Ericson statist. model 2=16409
Si^{28}(He^3, α)Si^{27} 0=9642
Si^{30}(α, γ)S^{34}, 2.10-3.25 MeV 4=15238
Th (p, He^3 or He^4), at 155 MeV 4=19785
Ti^{48} (p, α) at 18 MeV 1=19462
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U^{233} decay 1=17012
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from U^{235} fission 0=15608
U^{235,238}, comparison for mass no. depend. of ternary fission 4=6395
U^{238}, fission by 14 MeV neutrons 3=8144
V^{51}(p, α) at 18 MeV 1=19462
Xe^{131m}, search for double-quantum emission 0=11373
Y^{89}(d, α)Sr^{87}, direct interact. mechanism 2=20668
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Zr^{90}(d, α)Y^{88}, Zr^{92}(d, α)Y^{90}, direct interact. mechanism 2=20668
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He, collision of two, Born approx. calc. 3=710
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He, interaction between two normal atoms 0=13452, 15677
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He, polarizabilities and nuclear shielding factors, calc. 1=5961
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Hg, h.f.s. effect on imprisonment of resonance radiation 0=2729
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- Kr—Li scattering, Lennard—Jones potential determ. 4=20131
- Kr, polarizability and mag. susceptibility 1=4914
- Li, electron affinity 0=17658
- Li, electron polarizability 0=7698
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- Li, photoelectric K-absorption cross-section 3=704
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- Lu, Kα X-rays from radioactive sources 4=9665
- Mg, oscillator strength 2=10216
- Mn, X-ray scattering factor 4=4587
- Mn^{2+}, antishielding factor, calc. 1=795
- Mn^{2+}, crystal field effects on 3d charge density and mag. form factor 0=9886
- Mn^{2+}, in cubic fields, Hartree—Fock calc. 0=4253
- N in crystals, zero-field splitting 4=25828
- N_2, dissociation, atom conc. meas. 2=3792
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- N, evaporation from condensates at 4.2°K 0=3291
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- N, N^-, X-ray incoherent scatt. functions 0=4620
- N—O interactions, Morse potl. parameters 1=7447
- N, oscillator strength, Hartree—Fock calc. 3=4708
- N, polarizability, dipole, calc. 0=9736
- N, recomb. to N_2, e.s.r. study 2=16494
- N, trapping sites in solid N 1=5983
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- Na, e.s.r., optically polarized, spin relaxation 4=6486
- Na, ground state, electron scatt. 0=15673
- Na, oscillator strength 2=10216
- Na, partition function calc. 0=20551
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- Ne, polarizability and mag. susceptibility 1=4914
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- Ni, K-shell ionization, by fast electrons 1=2302
- O, appearance potential and scattering cross-section 2=20890
- O, diffusion in O_2 1=12920
- O, in discharge of O_2, concentration, time depend., recomb. 0=2332
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- O, electron affinity 0=8996
- O, electron capture by protons, p-orbital 3=15303
- O, gaseous, transport coeffs., calc. at low temp. and press. 0=3565
- O—H gas mixtures, at high temps. 4=3860
- O–O ground state interactions 0=4245
- O—O interactions, Morse potl. parameters 1=7447
- O, O^-, O^+, O^{2+}, O^{3+}, X-ray incoherent scatt. functions 0=4620
- O^{16}—O^{16} scatt., rel. to nuclear interactions, and surface 2=5973
- O, polarizability, dipole, calc. 0=9736
- O, recombination by Ar catalysts 3=13595
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- O, recomb. to O_2, e.s.r. study 2=16494
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- O, X-ray scattering factor 4=4587
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- O^{2-}, scattering factor 0=8197
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- Pb, Compton cross-section 0=15313
- Pb, γ-ray inelastic scatt., by bound electrons 2=18090
- Pb, L-shell fluorescence meas. 3=4711
- Pb, matrix elements, retarded and nonretarded, rel. to K X-ray relative intensities 0=11511
- Pb, photoelectric effect at high energies, calc. 0=5891
- Po, diamagnetic susceptibility 0=5847
- Po, range and straggling in Al and Au, at 4-15 MeV 1=2244-5
- Pt, L-shell fluorescence meas. 3=4711
- Pt, X-ray spectrum forbidden transition 1=3513
- Rb, electronic polarization relax., longit., effect of Rb—Cs exchange collisions 4=22321
- $Rb^{85,87}$, h.f.s. anomaly, from Knight shift 1=14824
- Rb, magnetic relaxation on paraffin covered walls 4=6492
- Rb, optically aligned, spin relaxation and disorientation collisions with buffer gases 0=482
- Rb, relaxation on silicones and paraffins 2=18425
- $Rb^{85,87}$, spin-exchange collisions, e.s.r. meas. 4=25591
- Rb spin relaxation induced by H_2 and rare gases 3=4723
- S, gaseous, transport coeffs., calc., at low temp. and press. 0=3565
- S and S^-, X-ray scattering factors 1=17285
- Sc, electronic polarizability 0=7698
- Si, Si^{3+}, Si^{4+}, X-ray incoherent scatt. functions 0=4620
- Sm, Kα X-rays from radioactive sources 4=9665
- Sn, Compton scatt. by, K-shell electrons 2=528, 20756
- T, reaction with H_2 and D_2 0=10347
- Tb^{149}, range and straggling in Al, at 4-29 MeV 1=2244-5
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- Tl, L-shell fluorescence meas. 3=4711
- Tl, oscillator strength 2=10216
- Tl, surface ionization on W 1=4568
- Tm, Kα X-rays from radioactive sources 4=9665
- U^{6+}, electronic polarizability, calc. 0=1466
- V^{51}, L fluorescence coeffs. 2=14213
- Xe, interaction force 4=21175
- Xe, interaction, potential energy curve 3=8212
- Xe, interstitial in graphite, energy 1=12400
- Xe—Li scatt., interact. potential eval. 3=15305
- Xe, polarizability and mag. susceptibility 1=4914
- Xe, scatt. of Li and K beams, velocity depend. 3=711
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- Zn, 4^3P_1 electron-excited level, width of mag. resonance 1=2281

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  - Al, 20 keV electron, plural scattering 4=13627
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wave-function for three electron near an atom, polarization and exchange effects 1=[illegible]
wave-function stability under perturbation 1=4661
wave-functions, analytic, spin—orbit, spin—other—orbit, and spin—spin interactions 1=[illegible]
wave functions containing interelectron coordinates applic. to energy level calc. 2=10646
wave functions, correlated, rapid convergence interpretation 4=[illegible]
wave-functions for g.s. of two-electron atoms 1=13804
wave-functions, improvement by use of variational [illegible]
wave-functions, limiting behaviour for large Z 4=4781
wave-functions, method for 1st row transition-metal atoms and ions [illegible]
wave-functions and [illegible] accuracy 1=[illegible]
wave functions and term energies, parameter tables 4=6459
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Z = 20-40, L_1, L_2, L_3, binding energies 3=[illegible]
Z=21-30, Hartree wave functions 3=8784
zero-order effects of interact. of degenerate configs. [illegible]
$Ag^{105,106,110}$, h.f.s., nuclear mag. moments 1=[illegible]
Ag^{111}, h.f.s. in $^2S_{1/2}$ ground state [illegible]
$Ag^{[illegible]}$, h.f.s. separations in ground state 4=11116
Ag, K-shell, or L-shell, [illegible] electron [illegible]
Ag, radial wave-functions [illegible]
Ag, second-order quadrupole effect for nuclear [illegible]
Al, ground and several excited states [illegible]
Al, Hartree—Fock eqns. for Al^{3+} 4=[illegible]
Al I, oscillator strength of $3s3p^2\,^2S$—$3s^2 4p\,^2P$ transition [illegible]
Al, spectral line calc. 1=[illegible]
Al, ^2P [illegible] state factor [illegible] meas. 1=[illegible]
Al^+, lowest config., Hartree—Fock calc. 4=[illegible]
$Al^{[illegible]}$, electronic energy levels, theory and exp. 4=[illegible]
$Am^{[illegible]}$, h.f.s. [illegible]
$Am^{[illegible]}$ by at. beam. 1=[illegible]
Ar, atomic scatt. factor, rel. to theory 4=[illegible]
Ar, Thomas—Fermi—Dirac eqn. solution 1=[illegible]

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Ar, transition probabilities of lines, giving excitation temp. 4=1302
Ar II, energy levels, anal. 0=15638
Ar II, statistical model, Slater integrals 3=6349
Ar^+ metastable states near Ar^{2+} threshold 4=1222
As, Hartree—Fock wave-functions 2=516
As^{75}, $^4S_{3/2}$ state, h.f.s., by atomic beam mag. resonance 1=8564
Au, energy levels, photo-electron method 4=19985
$Au^{195,199}$ hyperfine-structure separations 4=25499
Au, "universal potential" method 1=19677
B, exchange polarization effects in h.f.s. 1=12238
B, ground-state wave-function and energy 1=6080
B, $1s^22s2p^2$ configs., analytic self-const. field functions 4=15273
B, hyperfine consts. calc. 1=22698
$B^{10,11}$, $1s^22s^22p\,^2P_{3/2}$ state h.f.s. 1=10411
B^-, electron affinity and stability calc. 4=9643
B^{3+}, isotope shift, open-shell calc. 3=10456
B^{3+}, 1^3S state, twenty-parameter calc. 3=2591
Ba, L levels, measurement 4=18951
Ba, oscill. strengths of principal spectrum 2=14100
Ba, 6^3P_1 state lifetime 1=4931
Be, configuration interaction calc. 1=8687
Be, correlation energy from N-electron wave-function 1=764
Be, electron pairs 3=11764
Be, electronic energy calc., electron phase wave spinor theory 4=8766
Be, exchange polarization effects in h.f.s. 1=12238
Be, generalized product functions 3=10449
Be, ground-state energy calc. from Hylleraas wave-function 1=10455
Be, ground state energy by variation—perturbation calc. 4=16019
Be, $1s^22s2p^3$ configs., analytic self-consist. field functions 4=15273
Be, polarizabilities and shielding factors, perturbation calc. 4=16061
Be, $2p^2$ shell energy 1=2271
Be, wave-functions approx. 0=13391
Be^{2+}, S-states, variational calc. 3=21471
Be^{2+}, 1^3S state, twenty-parameter calc. 3=2591
Bi, energy levels, photo-electron method 4=19985
Bi^{205}, h.f.s. 1=2238
Bi isotopes from internal conversion lines 1=5373
Bi, μ-mesic 2P — 1S transitions, theory 4=5622
Bi^{210} RaE, h.f.s. 1=5465
Br and Br^- Hartree-Fock wave-functions 2=516
Br, doubly ionized 1=19567
Br, electronic g-factor 1=5651
Br, L levels, measurement 4=18951
Br, theory 1=11788
Br^- ion, radial wave-functions, determ. 4=1785
Br^-, quadrupole antishielding factor calc. 4=1791
Br^-, TFD model with correlation correction 0=17647
C, $1s^22s2p^3$ configs., analytic self-consist. field functions 4=15273
C^-, bound states rel. to phase shifts 4=19989
C^-, electron affinity and stability calc. 4=9643
C^- and photodetachment spectrum 1=6068
Ca, $4s4p\,^3P_1$ state, g_J factor meas. 3=2564
Ca, K-shell electron density and K-level 2=14206
Ca^+, orbitals radii calc. 1=20214
Cd^{111}—Cd^{113} hyperfine anomaly 1=2611
Cd, $5s5p\,^3P_1$ state h.f.s. meas. 4=17244
Cd, $5s5p\,^3P_1$ level g_J meas. 4=19954
$Cd^{107,109}$, $5s5p\,^3P_1$ state level crossing obs. 1=14191
$Cd^{111,113}$, $5s5p\,^3P_1$ state level crossings 4=5736
Cd^{107}, $(5s5p\,^3P_1$, state, Zeeman and hyperfine 4=3537
$Cd^{111,113}$, $^3P_1$ state, h.f.s. 0=17664
Cd, L-level energy shifts due oxidation and alloying 0=7690
Ce^{3+}, elec. quadrupole interact., rel. to anti-shielding 4=1118
Cl, antishielding of mag. and elec. hyperfine interact. 3=15098
Cl, electronic g-factor 1=5651
Cl, exchange polarization effects in h.f.s. 1=12238
Cl, from microwave Zeeman spectrum 1=11056
Cl I, ^4P of levels 1=5964

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Cl^-, lowest config., Hartree—Fock calc. 4=12377
Cm, trivalent, energy levels, low-lying 4=15275
Cm^{3+}, electronic energy levels, theory and expt. 4=22310
Co^{59}, h.f.s., rel. to nuclear quadrupole moment 1=7437
Co II, d^7 p config. 1=806
Co^{2+}, orbital degeneracy, magnetoelastic energy 0=3066
Cr, electron density, by X-ray scatt. 4=13588
Cr, and excited states, self-consistent field calc. 4=9641
Cr^{53}, h.f.s. meas., mag. -dipole interaction 4=6470
Cr, Q correction for $3d^n4s^k$ configuration of second spectrum 0=13414
Cr II, d^4 p config. 1=806
Cr^+, self-consistent field calc. 4=9641
Cr^{3+}, spin level splitting, Jahn—Teller effect 3=10452
Cr V, $(3d)^2$ config., multiplet, effect of electron correl. 4=15274
Cr^{n+}, analytical self-consistent-field functions 4=28122
Cs, D level hyperfine structure 1=17260
Cs, energy levels 2=22899
Cs, $(F = 4, m_F = 0)-(F = 3, m_F = 0)$ transition, freq. to 1:10″ 1=1725
Cs^{133}, h.f. frequency as time standard 1=15776
Cs^{134m}, h.f.s. 2=16477
Cs, L levels, measurement 4=19951
Cs, model, for ionization transients 3=24219
Cs, oscillator strengths, calc. 2=18416
Cs, radial wave functions for 26 orbitals 4=28121
Cu, electron radial distrib. 3=19934
Cu, excited states, spin—orbit coupling 4=15270
Cu, ground and several excited states 3=22476
Cu, X-ray atomic scatt. factor, abs. meas. 1=7433
Cu^+ to Kr^{8+}, ground-state wave-functions 1=12241
Cu^+, second-order quadrupole effect for nuclear hexadecapole coupling 2=18396
D, α^3 corrections to h.f.s., calc. 1=3505
D, hyperfine anomaly, theory 1=801
D, h.f.s., precise det. by e.s.r. 0=20543
D, Lamb shift 1=7425-6
Dy, electronic ang. momentum, g-value and ground-state assignment 1=9900
Dy^{3+}, free, in cryst. field and in ext. mag. field 3=8377
Er, electronic ang. momentum, g-value and ground-state assignment 1=9900
Er II, energy levels 3=10453
Er^{169}, h.f.s. meas. 3=22479
Er II, low-lying levels 2=10201
Er(IV), composition of electronic states 1=3504
Er^{3+}, free, in cryst. field and in ext. mag. field 3=8377
Eu, ground state g-value 1=13947
$Eu^{151,153}$, h.f.s. of ground state 1=803-4
Eu^{152} (13 yr) 3=7968
Eu II 0=17706
EuII, levels and g-sum rule 4=12367
F, exchange polarization effects in h.f.s. 1=12238
F, F^-, wave-functions and correlation energies 1=5965
F^{19}, h.f.s., unrestricted Hartree—Fock calc. 3=12760
F, from microwave Zeeman spectrum 1=11067
F, $1s^22s2p^k$ configs., analytic self-consist. field functions 4=15273
F, wave functions and correlation energies 4=3789
F^-, electron affinity and stability calc. 4=9643
F^-, ground-state wave-functions 1=13930
F^-, Hartree—Fock s.c.f. wave-functions 2=515
F^-, quadrupole antishielding factor calc. 4=3791
F^+, $1s^22s^23p^3nl$ config., coupling schemes calc. 4=1190
Fe^{57} in compounds and alloys, s-electron density 3=2699
Fe, d- and f-electrons, in crystalline fields, X-ray and neutron scatt. 0=12028
Fe group, α and β parameters 1=12249
Fe-group, Kβ'-line origin 1=13941
Fe-group, oscillator strengths 0=20590
Fe-groups, 3d wave-functions 0=2710
Fe, K-shell electron density and K-level 2=14208
Fe, number of 3d electrons 0=20768
Fe, Q correction for $3d^n4s^k$ configuration of second spectrum 0=13414
Fe, scatt. factor for outer electrons in Fe_3Al 0=1915
Fe series atoms and ions (Sc to Cu), Hartree—Fock calculations 0=9737
Fe series, Hartree—Fock calcs., Ti through Zn 0=17657

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structure—contd
Fe series, singly negative ions, Hartree—Fock calc. 4=28124
Fe, X-ray atomic scatt. factor, abs. meas. 1=7433
Fe II, d^6 p config. 1=806
Fe^{2+}, antishielding of mag. and elec. hyperfine interact. 3=25038
Fe^{2+}, in $FeCl_2$ 2=12397
Fe III, nonlinear effects in theory 3=8185
Fe^{3+}, Sternheimer factors, variational calc. 3=2567
Fe^{3+}, $^6S_{5/2}$ state, nuclear quad. splitting in solids 3=8336
Ga and Ga^+, Hartree—Fock wave-functions 2=516
Ga^{68}, h.f.s. separations 2=18418
Ga, spectral line calc. 1=4897
Gd, electronic structure, coupling 3=12761
Gd^{+++} absorption bands, oscillator strengths 3=19935
Gd^{3+}, h.f.s. for Gd^{156} 89 keV state 3=628
Gd^{3+}, h.f.s. const. of Gd^{154} first 2^+ state in aq. soln. 1=4826
Gd^{3+}, S-state, crystal-field splitting 1=7517
Gd^{3+}, spin-polarized Hartree—Fock calc., mag. interactions 1=7524
Ge, by Hartree—Fock self-consist. field 4=19956
Ge and Ge^{2+}, Hartree—Fock wave-functions 2=516
Ge^{71}, h.f.s. of ^3P ground state 3=17390
Ge, p^2 config., electronic g factor meas. 4=15278
H, α^3 corrections to h.f.s., calc. 1=3505
H, bound-state energies, rel. to plasma 2=5332
H, diamag. susceptibility and shielding calc. 1=5957
H, diamagnetism, continuum contribution importance 4=22354
H—e system, total wave-function 3=22501
H, e.m. interactions, parity nonconservation and time reversal invariance 0=11485
H, electronic energy levels, perturbation caused by proton structure 4=25479
H^-, electrostatic polarizability, calc. 1=12242
H, energy levels 1=18278
H, energy levels in mag. field, quasi-classical calc. 2=2602
H, fine structure det. from resonance fluorescence 1=8810
H, at 5000-20 000°K 2=13371
H, Gaussian wace-function calc. 0=20655
H, ground-state dispersion formula, integral representation 1=4898
H, ground state hyperfine separation 4=3777
H, hyperfine splitting 2=18407
H, ground-state h.f.s. 2=6102
H, h.f.s., correction formula, from assumed p and e electric dipole moments 1=3180
H, h.f.s., meson corrections 0=466
$H^{1,2,3}$, h.f.s., precise det. 0=7725
H, h.f.s. precise det. by e.s.r. 0=20543
H, integral representation of dispersion formula 0=15639
H, Lamb shift 1=7425-6
H, Lamb shift, consequences of zero-mass pseudoscalar meson 4=24989
H, Lamb-shift, finite mass of proton 2=16469
H, Lamb shift of $3^2S_{1/2}$ state, meas. 1=19583
H negative ions, electron—electron and electron—nuclear energies 4=1178
H, nuclear magnetic-shielding, by elec. field-gradient, and by cage 1=13926
H, one-dimensional 0=463
H +p system, effect of van der Waals forces 1=7427
H, parity impurities due to weak electron interact. 4=5957
H, radial eigenfunctions by Laplace transform 4=17241
H, Schrödinger eqn. solution 2=10195
H, Stark effect 1=7427
H, Stark effect theory 2=6089
H, 2S state, lifetime 0=1467
H-type one-electron Hartree parameters 4=1200
H wavefunctions, convergence 4=3775
H, wave-functions, Gaussian expansion 3=25042
H, weak interaction effects on energy levels 1=4899
H^-, binding energy from photodetachment cross-section 4=9629
H^-, bound-free absorption coeff. 3=2557
H^-, oscillator strengths, sum rules 2=20741
He, approx. wave-function, appl. to electron scatt. 1=3519
He, autoionization levels 4=12356

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  - **structure**—contd
    - He, calc., ground state 4=22297
    - He, chromospheric emission, level occupations 2=24127
    - He, configuration interaction, calc. 1=9897
    - He, conjugated, π orbital, doubly occupied, correl. energy 3=22576
    - He, correlation energies of excited states 3=4704
    - He^3, ^{1}D levels, hyperfine splitting calc. 4=28112
    - He^3, ^{1}D levels h. f. s., mag. reson. obs. 4=28111
    - He, eigenstate 2=18412
    - He, electron correl., exactly soluble model 3=4703
    - He, electron correlation in ground state 2=518
    - He, electron correl. in ground state 4=3779
    - He, electron movement in physical space, spinor-form wave eqns. 4=3778
    - He, electron, phase mechanical calc. 4=22293
    - He^4 I, energy levels 0=7722
    - He, energy levels, lower bounds, calc. 0=17654
    - He, excited S states, calc. 2=16472
    - He, excited states, single-excitation calcs. 4=25483
    - He, extended Fock method 2=8058
    - He, fifth-order wave function 3=4706
    - He^4 fine structure at low temp. 0=7694
    - He, fine structure, programme calc. 4=19946
    - He, first S states, numerical approx. 2=12286
    - He, ground state, electron spatial correlation 4=22296
    - He, ground-state, Ritz–Hylleraas solutions involving fractional powers 0=17649
    - He, ground state, wave-function expansion 3=25045
    - He, ground states, Hylleraas series with fractional powers 3=2559
    - He—H repulsive potential, quantum theory 4=9675
    - He^3 and He^4, Lamb shifts of ground states 0=7695
    - He and He-like ions, analytical wave functions 0=15642
    - He and He-like, screening approximation 0=20546
    - He—He repulsive potential, quantum theory 4=9675
    - He, Hartree–Fock approx., perturb. corrections 4=6465
    - He, Hartree—Fock orbitals, from many-electrons trial wavefunction 4=1202
    - He^3, h.f.s., nuclear resonance study 1=7431
    - He, interaction with triplet 1=5969
    - He isoelectronic sequence, 1^{1}S state, radial limits 4=1204
    - He isoelectronic sequence, perturbation—variation calc. 1=7430
    - He, isotope shift of deepest ^{3}P and ^{1}P levels, calc. 0=1470
    - He, Lamb shift 1=805
    - He$^+$, Lamb shift 1=7425-6
    - He, Lamb shift, calc., and electrostatic polarizability 1=12242
    - He, lower excited energy levels 1=5967
    - He negative ions, electron—electron and electron—nuclear energies 4=1178
    - He, (1s, ns) states, phase mechanics method 4=17242
    - He, 1^{1}S and 2^{3}S states, calc. 0=1469
    - He, oscillator strengths in ionized continuum 4=12397
    - He, oscillator strengths for 2 members of Rydberg series 15^1 → mP^1 4=12354
    - He, phase mechanics, quantal potentials 4=12358
    - He, phase mechanics velo. potential, calc. 4=12357
    - He, photo-ionization 0=15646
    - He, radial wave-functions for continuum 1=9898
    - He, S-states, variational calc. 3=22471
    - He, ^{3}S terms, variational calc. 3=4705
    - He, scattering factors calc. by 6-term Hylleraas wave-function 3=25703
    - He, Schrödinger eqn. for ground state 0=15640-1
    - He, Schrödinger eqn., lower bounds for eigenvalues 1=15686
    - He sequence, eigenvalues, corrections to 0=9740
    - He sequence, Hartree energies 1=5966
    - He, transitions between S and P states, f values 4=17243
    - He, triplet intervals, wave-function calc. 0=2711
    - He, by truncated reaction operator formalism 4=2553
    - He and 2-electron systems, accurate calcs since 1957, review 4=9630
    - He, (2p^2)^{3}P, quasi-stationary states 3=2554
    - He, (2p)^2 state, split-p-orbital calc. 4=1203
    - He, 2^{3}P state, energy and fine structure variational calc. 0=2713
    - He, 2^{3}P and 2^{1}P states, calc. 0=20547

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  - **structure**—contd
    - He, 2^{3}P and 3^{3}P states, fine structure 2=12285
    - He, 2^{3}S state, config. interaction method 3=25046
    - He, 2^{3}S state energy, configuration interaction calc. 2=22893
    - He, 2^{3}S state, twenty-parameter calc. 3=2561
    - He, wave-function, improved 0=11480
    - He, wave-function in momentum space 0=17655
    - He wave-functions from Slater orbitals 1=2278
    - He, X-ray scatt. factors, Schwartz method 3=10445
    - He$^-$, auto-ionization by spin—spin interaction 1=13928
    - (He^3)$^+$, hyperfine anomaly, theory 1=801
    - Hf, binding energies of K to O$_{III}$ shells 4=12368
    - Hf III and Hf IV 1=9899
    - Hf III, Slater parameters 3=703
    - Hg, decay 6^{3}P$_1$ level, presence of light beats 0=9743
    - Hg, electron in Coulomb field, Dirac continuum radial wave-functions 0=5542
    - Hg^{198}, energy levels 2=16481
    - Hg, energy levels, isotopic shift, calc. 2=16322
    - Hg, energy levels, photo-electron method 4=19965
    - Hg, fine structure calc. using Dirac's radial eqns. 0=7683
    - Hg, 5d^{9}6s^{2}6p levels 4=28128
    - Hg, 5461 A line, quantum numbers 3=10458
    - Hg, g$_J$ value of 6^{3}P$_1$ level 1=12244
    - Hg^{199}, hyperfine coupling constant 1=9908
    - Hg^{201}, hyperfine coupling constant 1=9908
    - Hg^{201}, h.f.s., det. by double resonance 1=3515
    - Hg^{197*}, h.f.s. of ^{3}P$_1$ level 1=17259
    - Hg^{199,201}, h.f.s. of 6^{3}P$_2$ state, by atomic beam method 0=13413
    - Hg isotopes, from internal conversion lines 1=5873
    - Hg, K-absorption edge, calc., effect of including Lamb shift 0=1471
    - Hg, K-electron wave-functions 1=2274
    - Hg, nuclear isomer shift 2=18419
    - Hg^{197,199}, ^{3}P$_1$ state, h.f.s. 4=1212
    - Hg, 6^{3}P$_{2,0}$ state, decay 2=3686
    - Hg, (6s6p)^{3}P$_1$ level, g$_J$ meas. 4=19954
    - Hg, 7^{3}S, level, magneto-optical resonance study 4=3794
    - Hg, 2537 A line, hyperfine structure 3=25054
    - Hg^{2+}, electron distrib., calc. from statistical model 0=9742
    - Hg^{2+}, second-order quadrupole effect for nuclear hexadecapole coupling 2=18396
    - Ho^{165} 2=14194
    - Ho, electronic ang. momentum, g-value and ground-state assignment 1=9900
    - Ho in ethyl sulphate, h.f.s. splitting 3=10572
    - Ho^{166}, h.f.s. 1=7314
    - Ho, h.f.s., nuclear moments of Ho^{65} meas. 4=17003
    - Ho^{3+}, free, in cryst. field and in ext. mag. field 3=8378
    - Ho^{3+}, free ion, term scheme eigenstates calculation 1=19584
    - Ho^{3+} ion, energy levels 1=17253
    - I, electron density distrib. 1=19581
    - I, energy levels from spectrum analysis 2=10202
    - I^{131}, h.f.s. 0=17484
    - I, L levels, measurement 4=19951
    - In 1=17273
    - In, analytical wave functions 3=25051
    - In, spectral line calc. 1=4897
    - In^{113m}, h.f.s., from atomic beam resonance 0=15511
    - In^{115m}, h.f.s. rel. to nuclear mag. moment 2=18242
    - Ir, energy levels, photo-electron method 4=19965
    - K, electron shake-off, following Ar^{41} β^- decay 3=19954
    - Kr^{86}, energy levels 2=16481
    - K, exchange polarization effects in h.f.s. 1=12238
    - K, excited bound states, eigenvalues 0=2725
    - K^{39}, 5^{2}P$_{1/2}$ level h.f.s. 1=11064
    - Kr^{83}, (4p)^5(5s)^3 ^{3}P$_2$ state, h.f.s. 3=8186
    - K^{39,41}, h.f.s. 0=17712
    - K^{42}, h. f. s. separation of ^{2}S$_{1/2}$ state 4=15134
    - Kr^{83}, h.f.s. splitting, atomic beam det. 2=1957
    - K, oscillator strengths calc. 4=22307
    - Kr, atomic scatt. factor, rel. to theory 4=3797
    - Kr, Hartree–Fock wave-functions 2=516
    - Kr^{38}, h.f.s. 1=13927
    - Kr, radial wave-functions 0=467
    - Kr, TFD with correlation correction 0=17647
    - Li, adiabatic approx. 3=8187
    - Li, adiabatic approx. with core—optical electron exchange 4=19922

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Li, auto-ionization by spin—spin interaction 1=13928
Li, configuration interaction, calc. 1=9897
Li, correl. of electrons in same shell 3=8175
Li, energy, least-squares local energy method 4=1206
Li, exchange polarization effects in h.f.s. 1=12238
Li, excited states, spin—orbit coupling 4=15270
Li, ground-state energy, calc., using wave-funttions containing interelectron coords. 0=1468
Li, ground state, lower bound to energy 2=22882
Li, ground state, mag. h.f.s. 0=9744
Li, ground state, orbitals and configuration 4=9714
Li, ground state, r_{ik}-integral calc. 1=13929
Li, ground state, variation calc. 3=15284
Li, Hartree—Fock restricted and unrestricted calcs. 0=7696
Li, hyperfine interaction, effect of correl. 3=10455
Li, hyperfine interactions, core-electron contribs., theory 4=17235
Li, hyperfine splitting of ground state 0=7697
Li, h. f. s., core polarization effect, validity 4=25502
Li^7, hyperfine, of level $2^2P_{1/2}$ 4=28126
Li, h. f. s. splitting, ground state, calc. 4=3792
Li, isoelectronic sequence, wavefunctions 4=6475
Li isoelectronic sequency ^2P terms, fine structure 4=19959
Li, isotope shift, open-shell calc. 3=10456
Li and Li-like ions, analytical wave-functions 1=12243
Li to Ne, wave-functions 2=8059
Li negative ions, electron—electron and electron—nuclear energies 4=1178
Li sequence, ^2S and $^2P^o$ states calc. 3=25052
Li, threshold energy of $(1s2s2p)^4P_{5/2}$ state 4=17248
Li valence electron 6d, Fock self-consistent field 4=1209
Li$^-$, electron affinity and stability calc. 4=9643
Li$^-$ to F$^-$, wave functions 4=25495
Li$^+$ core, polarization 1=8847
Li$^+$, 1^1S, 2^1S, and 2^3S states, eval. 2=10203
Li$^+$, S-states, variational calc. 3=22471
Li$^+$, 2^3S state, twenty-parameter calc. 3=2561
Lu$^{175-7}$, h.f.s. 2=9992-4
Lu, L—S coupling, h.f.s. calc. 3=22481
Lu II levels, g-factors 3=22482
Mg, oscill. strengths of principal spectrum 2=14200
Mg^{25}, ^3P state, h.f.s. analysis 2=14189
Mg^{10+}, 2^3S state, twenty-parameter calc. 3=2561
Mn, energy levels 3=19948
Mn^{56}, h.f.s., from atomic-beam mag. resonance 1=7315
MnI, h.f.s. meas. 3=12564
Mn, relative f-values 4=12369
Mn, from Zeeman effect 1=13940
Mn II, d^5 p config 1=806
Mn^{2+} in α, β and γ-MnS 3=20072
Mn^{2+}, in crystal field, ligand field theory 0=1728
Mn III, fine structure theory 4=1218
Mo, energy levels, isotopic shift, calc. 2=16322
Mo I, repulsion of energy levels 1=12237
N I, configurations rel. to spectrum 1=19592
N, exchange polarization effects in h.f.s. 1=12238
N, hyperfine splitting, effect of matrix interactions and buffer gases 2=18420
N, $1s^22s^m2p^n$ states, self-consist. field functions 3=19942
N, transition probabilities, from Hartree—Fock—Slater wave-functions 4=12370
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See also Hyperons; Nucleons and antinucleons.

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- Ag^{103,104} 0=4055
- Ag^{104} isomers, conversion electrons 1=631
- Ag^{106} 1=12181
- Ag^{106}, conversion electrons, levels in Pd^{106} 1=8652
- Ag^{108} 2=20555
- Ag^{108m} 0=9568
- Ag^{109}(n, p)Pd^{109} 2=3316
- Ag^{110} decay to Cd^{110}, conversion electrons 3=24898
- Ag^{110}, search for β^+ 3=6206
- Ag^{110m} 2=12176
- Ag^{110m}, β and internal-conversion electrons 0=7530
- Ag^{110m}, β^+ 4=6283
- Ag^{110m,111} 3=22401
- Ag^{112} 3=650
- Al(γ, β) at 8 MeV 2=5886
- Al^{24}, circular polarization 3=17428
- Al^{26*} 1=19464
- Al^{26m} 0=7585
- Al^{26m} 4=6276
- Al^{27}, 2.2 MeV level decay 2=1793
- Al^{30}, new nuclide 1=12168
- Am^{242m} (152 yr), conversion electrons 0=20372
- Ar, L—MM Auger fine structure 0=17715
- Ar^{41} → K^{41} 0=4030
- Ar^{41}, shape 3=6202
- As^{70} 3=12624
- As^{79} 2=3505
- As^{80} → Se^{80} 0=5697
- As^{81} decay 1=7345
- Au^{190}, conversion electrons 1=13738
- Au^{190,192}, conversion electrons 2=409
- Au^{194}, conversion spectrum 0=7523
- Au^{194,196,198}, conversion lines 0=20403
- Au^{196}, conversion electrons 3=10274
- Au^{196}, K-conversion coeffs. 3=656
- Au^{196}—Pt^{196} 2=10022
- Au^{196} → Pt^{196}, conversion electrons 1=13739
- Au^{197}, conversion electrons from Coulomb excitation 1=3425
- Au^{198} 2=3506
- Au^{198} 3=2418
- Au^{198}, anomalies, rel. to $\beta-\gamma$ directional correl. 2=3522
- Au^{198}, exact shape of spectrum 1=7340
- Au^{198}, longitudinal polarization rel. to Sn^{153} 1=19391
- Au^{198}, longitudinal polarization rel. to Sm^{153} 2=22764
- Au^{198}, 965 keV transition 4=25360
- Au^{198}, shape factor 2=20550
- Au^{198}, shape factor rel. to theory 2=401
- Au^{199}, conversion and K and L-Auger electrons 0=11369
- Au^{199}, rel. to energy levels 4=15169
- B^{8} 0=9555-6
- B^{11}, 2·13 MeV state 3=7986
- B^{12} 1=17020
- B^{12} → C^{12} 1=4844
- B^{12}, comparison with N^{12} 3=10285
- B^{12}, decay theory 2=12162
- B^{12} ft values rel. to induced effects theory 4=1037
- B^{12}, $\gamma-\gamma$ coincidences 1=19363
- B^{12} and N^{12} → C^{12}, test of conserved vector current theory 3=15137
- B^{12} rel. to C^{12} 3=4358
- B^{12}, rel. to N^{12}, shape factor ratio, comp. to CVC theory 2=16353
- Ba^{129} 1=5870
- Ba^{133} → Cs^{133} 0=20381
- Ba^{134}, conversion electrons 3=15114
- Ba^{137}, Auger electrons 1=7354
- Ba^{139} 0=20410
- Ba^{139} 1=7341
- Ba^{140}, β and conversion electrons 0=4054
- Ba^{140}, from γ-ray spectra 3=8039

Beta-ray spectra—contd
Ba^{141} 1=7342
Ba^{141-2} 2=18291
Be, electron scatt. at 40 MeV 1=681
Be^{11}, rel. to energy levels 1=10964
Bi isotopes, internal conversion lines 1=5873
Bi, L_{111} Auger spectrum after X-irrad. 0=9574
Bi^{205} positron spectrum 2=10061
Bi^{205}, positrons 2=10050
$Bi^{205,206}$ positrons 2=16356
Bi^{206}, monoenergetic positrons following electron-capture decay 1=9832
Bi^{206}, positrons 2=10050
Bi^{210} 2=10046
Bi^{210}, from β-ray absorption curves 0=5703
Bi^{210}(RaE), analysis, rel. to parity nonconservation 0=11356
Bi^{210}(RaE), calc. 0=15544
Bi^{210}(RaE), rel. to parity conservation 0=5702
Bi^{210}(RaE), secondary electrons after β- or α-decay 1=13708
Bi^{212} 0=17546
Bi^{212} (ThC) 1=2186
Bi^{214}, end-point energy 1=657
Br^{75}, β^+ spectra 2=3518
Br^{75}, β^+ spectra 3=2407
Br^{76} 0=4066
Br^{78}, β^+ 0=13174
Br^{78}, β^+ 1=8630
Br^{83} 3=19817
Br^{86} 2=18289
C, electron scatt. at 40 MeV 1=681
C(γ, β) at 8 MeV 2=5886
C^{10}, end point, rel. to cluster model 4=3598
C^{12} rel. to B^{12} 3=4358
C^{12}, 7.656 MeV level, nuclear pair emission 0=9573
C^{12}, 7·66 MeV level 1=19363
C^{15} 0=2635
Ca^{42}, conversion electrons from electric monopole transition 1=10986
Ca^{47}, transitions magnetic analysis 4=6277
Ca^{48}, double β-decay 0=5696
Cd^{103} 0=20394
Cd^{114}, from $Cd^{113}(n, \gamma)$, internal conversion, 20-3000 keV and Cd^{114} levels 3=24959
Cd^{114}, conversion electrons 1=8595
Cd^{115m} 0=2636
Cd^{115m} 3=17438
Cd^{117} 4=19726
Cd^{118}, 49 min 1=7344
Ce^{141} 2=14028
Ce^{141}, β-γ polarization correlations 2=408
Ce^{141}, oriented, matrix elements in forbidden decay 1=5859
Ce^{143} decay 4=9410
Ce^{144} 0=11353
Ce^{144}, β and conversion electrons 0=5698
Ce^{144}, conversion electrons 0=11368
Ce^{144}, conversion electrons 2=3523
Ce^{144} decay 1=16988
$Cl^{36} \rightarrow S^{36}$ decay, positron branch and electron capture 2=22771
Co^{55} β−γ correl. 2=10042
Co^{55}, β−γ correl. 3=6192
$Co^{55} \rightarrow Fe^{55}$ 0=11307
Co^{56}, β^+, energies and intensities 1=10984
Co^{57} decay, and Fe^{57}, 14.4 keV internal conversion 3=19814
Co^{58}, K/β^+ ratio 2=7948, 16363
Co^{58}, K-capture/β^+ ratio, Fierz interference term 2=3519
Co^{58}, positrons, shape factor anal. 3=19815
Co^{60}, correction for backscatt. and energy resolution 4=27830
Co^{60} decay in Co−Fe alloy anisotropy 2=399
Co^{60} decay in Co−Fe alloy, anisotropy 3=4590
Co^{60}, twice-forbidden transition to Ni^{60}, intensity 1=10981
Co^{63} decay 1=7345
Cr^{55} 3=22329
Cr, K Auger electrons 2=16362
Cr^{56} 0=11351
Cs^{131}, accompanying K-capture, coincidences with K X-rays 0=5710
Cs^{132}, end-point energy of β^+ spectrum 3=10295
Cs^{133}, K−LL Auger spectrum 2=1846
Cs^{134}, matrix elements 4=1046

Beta-ray spectra—contd
Cs^{134}, three partial spectra 4=15190
Cs^{137} 2=14034
Cs^{137} 4=1047
Cs^{137}, second forbidden spectra 0=17542
Cu, K Auger electrons 2=16362
Cu^{66} decay 4=15187
Dy isotopes, positron spectra 2=14035
$Dy^{152,153,155,157}$ 2=14050
$Dy^{155,157}$, conversion electrons 1=3426
Dy^{157} 3=22342
Dy^{160} 1=19365
Dy^{161}, Auger electrons 1=17053
$Dy^{161,163}$, conversion electrons following Coulomb excitation 0=15551
Dy^{165} 1=12179
Dy^{165} 3=655
Dy^{165m} 0=9600
Dy^{166} 0=13175
Dy^{166} 1=17059
Dy^{166}, K = 0 rotational band in Ho^{166} 1=8601
E^{253} 1=8660
Er isotopes, positron spectra 2=14035
$Er^{158,161}$, conversion electrons 3=10308
Er^{159} decay 2=5857
Er^{159} decay 3=4597
Er^{165}, electron capture decay to Ho^{165} 3=2415
Er^{166}, conversion electron, from Tm^{166} decay 3=8049
Er^{166}, conversion electrons 3=10269
Er^{171} 2=1838
Er^{172} 1=8639
Er^{172} 1=10977
$Er^{158} \rightarrow Ho^{158} \rightarrow Dy^{158}$ 1=19393
Eu^{146}, conversion electrons 0=4060
Eu^{147}, β^+ decay to Sm^{147} 4=27997
Eu^{147}, conversion electrons 2=5866
Eu^{149} 2=5865
Eu^{150} 3=19822
Eu^{152} 0=13199, 20411
Eu^{152} 1=5860
$Eu^{152} \rightarrow Gd^{152}$ β^- decay spectrum 1=638
Eu^{152}, monoenergetic β^+ from Sm^{152} 1=19401
Eu^{152}, positron decay 4=22077
$Eu^{152,152m}$, β^+-decay 0=9566
Eu^{152m}, internal and external conversion 0=7526
$Eu^{152,154}$, 1st forbidden transitions, shape factors 0=15546
Eu^{153}, conversion electrons following Coulomb excitation 0=15551
Eu^{154} 1=663
Eu^{154} 1=17044
Eu^{155} 1=656
$Eu^{156} \rightarrow Gd^{156}$ 1=5877
Eu^{156} 1=17021
Eu^{156} 2=1801
Eu^{156} decay 2=3481
Eu^{156} 3=10299
Eu^{157}, rel. to decay scheme 4=19731
Eu^{159} 2=5844
Eu^{160} 1=17113
F^{18}, conversion electrons 0=20414
$F^{19}(d,\alpha)O^{17}$ 1=9875
$F^{19}(d,p)F^{20}$ 1=9875
$F^{19}(p,\alpha)O^{16}$ 1=9875
F^{20} decay, β−γ correl. 2=10048
F^{20} decay, β−γ correl. 3=6203
F^{20}, Gamow−Teller interaction 1=5819
Fe^{59} 0=4070, 7532
Fe^{59} 1=16982
Fe^{59} 3=17430
Ga, K Auger electrons 2=16362
Ga^{68} decay 2=16345
Ga^{64}, β^+ 0=5699
Ga^{66}, 0^+−0^+ positron spectrum, shape 3=8046
Ga^{72} decay, E(max) ≤ 320 keV 4=22066
Ga^{72}, 1st forbidden transition, shape factor 0=15546
Ga^{74} 0=15545
Ga^{74} 2=16321
Ga^{75} decay 1=7345
Ga^{76} 1=17113
Gd^{145}, β^+ 0=1381
Gd^{146}, conversion electrons 0=4060
Gd^{152}, populated by Eu^{152} decay 3=17417

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Gd^{156}, K-LL Auger lines 0=5709
Gd^{159} decay, $\beta-\gamma$ coincidences 3=22340
Ge^{66} 1=3412
He^{3} 4=6150
He^{6} decay 3=614
He^{6}, recoil energy spectrum meas. 4=3597
Hf isotopes 3=8051
Hf$^{168-70}$ 1=8645
Hf^{171,173}, conversion, 30-350 keV 3=8050
Hf^{175}, conversion electrons, coincidence study 2=5863
Hf^{180m}, conversion electrons 1=4849
Hf^{181} 1=8627
Hf^{182}, new nuclide 1=12169
Hg isotopes, internal conversion lines 1=5873
Hg^{189}, conversion electrons 1=13738
Hg^{190}, conversion electrons 1=13738
Hg$^{191-3,195}$ 2=400
Hg^{192} 1=9829
Hg^{193} 2=18283
Hg^{197}, conversion electrons 0=13142
Hg^{198}, conversion line 0=20403
Hg^{198}, 412 keV internal conversion 1=10990
Hg^{198,199}, conversion lines 0=20404
Hg^{199}, conversion and K and L-Auger electrons, from Au^{199} 0=11369
Hg^{199}, internal-conversion electrons 0=11370
Hg^{200}, conversion electrons 2=1847
Hg^{203}, β and conversion electrons 0=4061
Hg^{203} internal conversion, $\beta-\gamma$ coincidence 2=10064
Hg^{203}, K-and L-conversion 3=10314
Hg^{206} 2=10035
Ho, interval conversion 3=6208
Ho^{156} 1=2191
Ho^{165}, conversion electrons 3=15120
Ho^{165}, conversion electrons following Coulomb excitation 0=15551
Ho^{166} 1=17059
Ho^{166} 2=5846
Ho^{166}, conversion electron spectrum 2=7939
Ho^{166}, decay, $\beta-\gamma$ correlation 2=5859
Ho^{166m}, K-conversion electrons 0=17523
Ho^{166m}, orientated 1=8643
Ho^{168} 1=17113
Ho^{169} decay 4=9454
Ho^{170} 1=17113
I^{124} 0=20415
I^{128}, 1. 2 MeV, shape and end-point energy 2=402
I^{128}, student lab. 2=1837
I^{132} 1=19395
I^{132}, internal conversion electrons 3=22335
I^{132}, internal conversion study 3=2409
I^{134} 1=8640
In^{108} 2=18253
In^{110}, In^{110m} 2=12177
In^{110m}, K–L conversion electron energy diff. 1=17055
In^{114}, allowed shapes, deviations 1=13706
In^{114}, anomalous spectrum 3=10290
In^{114}, form factor 4=30325
In^{114} polarized, Fe alloy, asymmetry 3=2417
In^{114}, shape factor 1=7346
In^{114}, shape factor and deviation term 1=17023
In^{114m} 4=3607
In^{115}, fourth-forbidden β-decay, end-point energy 1=8638
In^{116} 2=12145
In^{118}, 5.1 sec 1=7344
In^{119,119m} 2=1800
In^{119g} 0=11352
In^{121m} 0=11352
In^{123m} 0=11352
Ir isotopes, conversion lines 2=14054
Ir^{182} 1=13752
Ir^{184} 1=13752
Ir^{186}, positron spectrum 3=10313
Ir^{190}, conversion electrons 0=17564
Ir^{192}, polarized, Fe alloy, asymmetry 3=2417
Ir^{192,194} 0=13169
Ir^{195,197} 1=13713
K^{40}, β^{+}/β^{-} ratio 2=14036
K^{40} $\beta:\gamma$ branching ratio 1=13734
K^{44} decay 1=12170
K^{45} → Ca^{45}, from α-particle and d bombard. of Ca^{48}CO$_3$ 4=30321

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K^{47} decay 4=12179
Kr^{74}, β^{+} 0=20395
Kr^{85}, branching ratio measurement 1=10982
Kr^{90}, 33 sec fission product decay 4=22067
La^{131}, β and conversion electrons 0=4057
La^{140} 2=14026, 14028
La^{140}, β^{+}, conversion, rel. to γ-rays from Ce^{140} 0=13210
La^{140}, 1st forbidden transition, shape factor 0=15546
Li-ion drift semicond. detector 2=13775
Li^{6}, electron scatt. at 40 MeV 1=681
Li^{8} 0=9555-6
Lu, Auger electrons 2=10067
Lu isotopes, positron spectra 2=14035
Lu, neutron-deficient isotopes, conversion lines 0=13212
Lu^{167}+Yb^{167}, conversion 2=16365
Lu$^{168-70}$ 1=8645
Lu^{169} and Lu^{170}, conversion electron spectra 1=13737
Lu^{169,171} conversion electrons, rel. intensities 2=16367
Lu$^{169-172}$ conversion, above 1MeV 2=16364
Lu$^{169-173}$, internal conv. electrons 0=2648
Lu^{173,174}, conversion spectra 0=13211
Lu^{170,174m}, conversion electrons 0=15538
Lu^{175}, conversion electrons following Coulomb excitation 0=15551
Lu^{175}, $\gamma-\beta$ angular correlations 2=3459
Lu^{176m} 3=8010
Lu^{176m} decay, branching ratio 4=9456
Lu^{177} 1=17027
Lu^{177} 2=20516
Lu^{177} → Hf^{177} 0=4030
Lu^{178} 4=25356
Lu^{178,178m,179} 2=5844
Lu^{179} 3=10311
Lu^{180} 1=17113
Mg, irrad. with 490-1390 keV protons 0=5744
Mg^{27} 3=2405
Mg^{27} 3=6199
Mn, K Auger electrons 2=16362
Mn^{54} 2=10042
Mn^{52} 2=7929
Mn^{52}, low temp. study 0=9557
Mn^{52}, positron decay 1=12175
Mn^{56} 3=4592
Mn^{56} and $\beta-\gamma$ coincidences 3=8032
Mn^{56} decay, $\beta-\gamma$ correl. 2=10048
Mn^{56} decay, $\beta-\gamma$ correl. 3=6203
Mn^{57} 4=6276
Mo^{99}-Tc^{99}, K Auger electrons 1=13740
N^{12} 1=17020
N^{12} and B^{12} → C^{12}, test of conserved vector current theory 3=15137
N^{12}, rel. to B^{12}, shape factor ratio, comp. to CVC theory 2=16353
N^{12} → C^{12} 1=4844
N^{12}, comparison with B^{12} 3=10285
N^{12}, decay theory 2=12162
N^{12} ft values rel. to induced effects, theory 4=1037
N^{16} 0=2635
N^{16} 1=9830
N^{16}, β^{-}-decay 1=19387
N^{16} decay 4=9446
N^{17}, to bound states of O^{17} 4=15184
Na^{22}, allowed shapes, deviations 1=13706
Na^{22}, autoionization electrons 1=17025
Na^{22}, autoionization and X, K, L line intensities 1=8641
Na^{22}, conversion electrons 0=20414
Na^{22} meas., rel. to Fierz interference term b 1=17030
Na^{24} 4=1041
Na^{24}, circular polarization 3=17428
Na^{26} 1=7347
Nb^{95} 0=11353
Nb^{98} 1=17113
Nb^{100} 1=17113
Nd photoelectrons 2=7646
Nd^{139}, β^{+} 3=10303
Nd^{147} → Pm^{147} 1=3413
Nd^{147}, rel. to beta transition analysis 2=10043
Nd^{149} 4=17098
Ne^{18}, positron spectrum 4=6272
Ne^{22}, conversion electrons 0=20414
Ne^{23} 2=1821
Ni^{65} 4=19720
Ni^{65} $\beta-\gamma$ correl. 2=10042

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Ni^{65}, $\beta-\gamma$ correl. 3=6192
Np^{234,236,238,239}, internal conversion electrons 0=4063
Np$^{238} \rightarrow$ Pu^{238} 1=5862
Np^{239} 0=5700
Np^{239}, conversion electrons 0=2647
Np^{240}, 7.3 min state 0=1380
O^{14}, β^+ energy in $0^+ \rightarrow 0^+$ decay 1=645
O^{14}, positron spectrum 4=6272
O^{16} inelastic scatt. of electrons 3=19836
O^{19} 0=2635
O^{20} decay 0=5731
Os^{186,188,189,190,192}, conversion electrons from Coulomb excitation 1=3425
Os^{189}, M3 isomer 0=7521
Os^{191}, conversion electrons 0=13142
Os^{191,191m} 3=10312
Os^{192}, L and M conversion ratios 0=20407
Os^{193}, conversion electrons 0=13142
Os^{194} 4=25359
P^{32} 0=13196
P^{32}, allowed shapes, deviations 1=13706
P^{32} decay, deviations from allowed form 2=10044
P^{32} decay, deviations from allowed form 3=6201
P^{32}, end point energy 4=19722
P^{32}, interpretation 2=403
P^{32}, Kurie plot analysis 1=16760
P^{32}, Kurie plots, nonlinearity 1=17024
P^{32}, low-energy region 1=5845
P^{32}, at low temps. 2=18282
P^{32}, secondary electrons after β- or α-decay 1=13708
P^{32}, shape factor 1=7346
Pa$^{228} \rightarrow$ Th^{228} 1=4832
Pa^{233} 1=19373
Pa^{233}, Auger and conversion spectra 4=30218
Pa^{233} β^- decay, Auger spectrum 0=11371
Pa^{233}, conversion electrons 2=5814
Pa^{233}, internal conversion and β-ray 3=10318
Pa$^{233} \rightarrow$ U^{233} transition 0=15553
Pa^{234} 2=7944
Pa^{234}, β- and internal-conversion electrons 3=2395
Pa^{234}(U X2) 0=1386
Pa^{234}, (UZ) 0=2638
Pa^{234m}, conversion electrons 2=22766
Pa^{237} 0=9562
Pb, electron scatt. at 40 MeV 1=681
Pb foil, X-irrad., 320 kV 3=12241
Pb^{210} 0=9563
Pb$^{210} \rightarrow$ Bi$^{210} \rightarrow$ Po^{210}, configuration mixing in Bi^{210} 0=13144
Pb^{211} 2=20549
Pb^{211} 3=10315
Pb^{212} 1=17039
Pb^{212}(ThB) 4=3607
Pd^{109} 2=5849
Pd^{109,111} 2=10072
Pd^{111}, two isomers 0=11354
Pm^{141,142}, β^+-emission/K-capture ratio 0=5689
Pm^{146} 1=650
Pm^{147} 0=7512
Pm^{147} 0=2395
Pm^{147}, β-disintegration energy meas. 4=22075
Pm^{147}, low energy photon and electron spectra 0=20386
Pm^{147}, at low temps. 2=18282
Pm^{147}, secondary electrons after β- or α-decay 1=13708
Pm^{148} 1=5878
Pm^{148} 2=16369
Pm^{148} 3=8043
Pm^{148,148m} 2=7946
Pm^{149} 0=17532
Pm^{149} 1=640
Pm^{149}, and nuclear alignment of isotopes 1=8633
Pm^{151} decay, $\beta-\gamma$ coincidences 4=12186
Pm^{151}, internal conversion 3=12634
Pm^{151}, and nuclear alignment of isotopes 1=8633
Pm^{153} 3=4595
Po^{210}, L-Auger electrons 2=413
Pr$^{140} \rightarrow$ Ce^{140} decay 0=11355
Pr^{140}, positron 2=1839
Pr^{142}, mean energy rel. to form factor 4=27996
Pr^{142}, $2^- \rightarrow 2^+$ first-forbidden decay 4=22074
Pr^{143}, autoionization electrons 1=17025
Pr^{143}, autoionization and X, K, L line intensities 1=8641

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Pr^{143}, β-disintegration energy meas. 4=22075
Pr^{144}, circular polarization and $\beta-\gamma$ correl., and spin 3=22270
Pr^{144} and level spins, from $\beta-\gamma$ correl. 3=22308
Pt isotopes, conversion lines 2=14054
Pt isotopes, n-deficient, conversion electrons 3=8052
Pt isotopes, neutron deficient, conversion 3=8053
Pt^{188} 3=8016
Pt^{188} decay, $\beta-\gamma$ coincidences 4=12176
Pt^{191}-Ir^{191} 2=5848
Pt^{192}, L and M conversion ratios 0=20407
Pt^{194,196}, conversion lines 0=20404
Pt^{201} 4=3619
Pu^{238}, branching ratios, de-exciting γ-vibrational band at 1030 keV 2=5806
RaE, end point energy 4=19722
RaE(Bi^{210}) 1=19397
RaE (Bi^{210}) 2=10046
Ra^{225}, conversion, from Th^{229} decay 3=8056
Ra^{228} 0=7511
Ra^{228}, mesothorium I 1=13717
Ra^{228}, (MsTh$_1$), low energy conversion lines, Curie plot 2=389
Rb^{84}, positrons, outer and inner group 4=12183
Rb^{86}, $\beta-\gamma$ cascade 2=407
Rb^{86} decay, $\beta-\gamma$ directional correlation 4=9449
Rb^{87} 1=642
Rb^{87}, max.-energy det. 0=1387
Rb^{87}, third-forbidden spectrum shape, analysis 0=13194
Rb^{90} 4=22068
Re^{179,181}, conversion electrons 0=15538
Re^{182}, positron decay 3=22347
Re^{183}, Auger transitions 0=7521
Re^{184} decay, e$^+$, e$^-$, conversion, from W + d, 13.6 MeV 3=24910
Re^{184}, internal conversion 3=10271
Re^{186}, polarized, Fe alloy asymmetry 3=2417
Re^{186,188}, once-forbidden transitions 4=3616
Re^{187} 2=3511, 5843
Re^{188} 0=5733
Re^{189} 4=3618
Rh^{97} decay 3=2408
Rh^{103} decay 1=13718
Rh^{106} 0=11358
Rh^{106}, conversion electrons, levels in Pd^{106} 1=8652
Rh^{106} 2=5872
Rh^{106m} 0=11359
Rn active deposits, L-Auger lines 0=5711
Ru^{105} 0=11357
Ru$^{105} \rightarrow$ Rh^{105} 0=11385
S^{30} 1=7336
S^{30}, positron spectrum 4=6272
S^{31} 4=6276
S^{35}, β-disintegration energy meas. 4=22075
S^{35}, correction for backscatt. and energy resolution 4=27830
S^{35}, Kurie plot analysis 1=16760
S^{35}, secondary electrons after β- or α-decay 1=13708
S^{35}, very low energies 1=13673
Sb^{113,115} 0=13201
Sb^{113,115}, β^+ 3=10291
Sb^{115}, β^+ 2=3532
Sb^{116}, 5 hr, search for β^+ emission 1=2198
Sb^{120m}, conversion electrons 1=622
Sb^{124}, 1st forbidden transition, shape factor 0=15546
Sc^{41} 1=11011
Sc^{42}, β^+ decay 2=1929
Sc^{48} 3=10288
Se^{73}, isomers, β^+ 1=8642
Se^{75}, conversion electron spectrum 0=13204
Se^{75}, conversion electrons 0=4062
Se^{75}, conversion electrons 1=17056
Se^{75}, lack of 188 keV and 203 keV conversion lines 1=5874
Se^{83} $\beta-\gamma$ correl. 2=10042
Se^{83}, $\beta-\gamma$ correl. 3=6192
Si, electron scatt. at 40 MeV 1=681
Si^{26}, β^+ 0=20417
Si^{26}, positron spectrum 4=6272
Si^{27}, β^+ 1=19403
Sm^{142,143}, β^+-emission/K-capture ratio 0=5689
Sm^{150}, thermal neutron capture 3=15118
Sm^{152}, K-LL Auger spectrum 0=2642

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Sm^{152}, monoenergetic β^+ 1=19401
Sm^{153} decay, $\beta-\gamma$ coincidences 2=3528
$Sm^{153} \rightarrow Eu^{153}$, conversion and Auger electrons 1=13731
Sm^{155} 3=12635
Sm^{156} 3=17442
Sn^{113}, β^+ 3=10291
Sn^{117m}, electron-γ correl. meas. 2=3527
Sr^{85} 2=3513
Sr^{89}, rel. to internal bremsstrahlung 2=18284
Sr^{90} 0=2395
Sr^{93} 2=20570
$Sr^{90} + Y^{90}$, Kurie plot analysis 1=16760
T, average energy 1=554
T β-sources in Zr and Ti carriers 2=3495
T, low-energy region 0=4053
T^{160}, orientated 1=8643
Ta isotopes, neutron deficient 3=8051
Ta^{173-8}, conversion electrons 0=15538
Ta^{175}, conversion electrons 0=9605
Ta^{176}, β^+ 1=8621
Ta^{181}, $\beta-\gamma$ coincidence study 0=20412
Ta^{181}, conversion electrons following Coulomb excitation 0=15551
Ta^{182} 0=1392
Ta^{182}, 115-day 4=22079
Ta^{182}, transition probabilities 0=9565
$Ta^{182} \rightarrow W^{182}$ 4=28001
Ta^{182m}, 16 min, conversion electrons 1=3404
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CdS, elec. field effect in photoconduction 2=12542
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CdS, exciton line shape and photoconductivity 2=8496
CdS, exciton motion, direct observation, using Zeeman splitting of n = 2 exciton state 1=3636
CdS, exciton spectra 2=16821
CdS, exciton spectrum, and doping effects 4=28426
CdS, exciton spectrum, fine structure and magneto-optical effects 1=7559
CdS, exciton spectrum, from reflection and fluorescence spectra 0=2943
CdS exciton states and band structure 1=17475
CdS, excitons, Bose-Einstein condensation 3=6498
CdS, excitons, photon recoil during formation and decay 2=8191
CdS, Faraday rotation due to free electrons 2=16806
CdS, field effect in monocrystals 0=6118
CdS, field emission 2=11687, 13580
CdS, field emission of electrons 1=11962
CdS, field emission, energy spectrum 3=21852
CdS, field inhomogeneities 2=8187
CdS film growth on rocksalt, electron diffr. exam. 4=4670
CdS, films, absorption spectrum, rel. to preparation 1=14588, 17882
CdS, films, cathode conductivity 4=22709
CdS, films, with CdCl$_2$ impurity, elec. cond., effect of moisture 4=22708
CdS, films, charact. electron beam energy losses 1=17492
CdS, films, cold electron emission 4=21556
CdS, films, contact potential, illum. depend., photoshift 0=7956
CdS, films, crystallinity and electronic props. 3=22941
CdS, films, current noise 3=25361
CdS, films, current pulse generator 4=26148
CdS, films, defect annealing, effect on elec. props. 2=2160
CdS films, electrical conductivity, field effect 4=10046
CdS, films, elec. props. and in rectifiers 2=18718
CdS films, electron irrad., induced conductivity 0=605
CdS films, Hall effect studies 4=26040
CdS, films, light transmission meas. 2=12586
CdS films, photoconductivity, with and without Cl doping 1=10058
CdS, films, photocond., preparation 4=26147
CdS, films, prep., resistivity and photocond. 1=17793
CdS films, preparation and sensitization 1=11323
CdS, films, prep. by sublimation 1=12665
CdS films, recrystallization and structure 4=20804
CdS films, recrystallizing technique 3=23396
CdS films, sputtered, resistivity, photoconductivity, transmittance, rel. to temp. 4=20810
CdS films, vacuum-deposited, structure and resistivity 4=20805
CdS films, vapour-deposited, hexagonal, cubic phase prod. 4=29099
CdS films, X-ray diffr. obs., effect of substrate temp. 4=7710
CdS, fluctuations, neutral transport and photoconduction 1=10057
CdS, fluorescence, blue and green, by u.v. excitation, 4·2° and 77°K 3=949
CdS, fluorescence of crystals showing mechanically excited emission 2=4196
CdS, fluoresence edge emission, 4.2-77°K, energy model 1=1176
CdS, fluorescence, use in optical maser 3=526
CdS, fluorescent band-edge emission 2=8573
CdS, fund. absorption edge, shift by elec. fields 1=17880
CdS, GaCl$_3$ impurity clustering, X-ray obs. 4=15473
CdS with GaCl$_3$ impurity, stacking faults in crystals 4=25949
CdS, galvanomagnetic effects and carrier props. 3=8523
CdS, as γ-detector, preparation and mounting 0=313
CdS, γ-irrad., defect production meas. 4=20480
CdS, γ-ray induced conductivity 3=2908
CdS, γ-ray induced elec. cond. 1=19903
CdS, γ-ray photoconducting 3=6629
CdS, γ-ray photoconductivity 2=23457
CdS, under glow discharge and X-irrad., space-charge limited currents 0=18038

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CdS, green fluorescence, 4°—77°K 1=11396
CdS, growing of single crystals 2=6766
CdS, growth of large monocrystals for γ-dosimetry 2=8795
CdS, growth mechanism, crystal form, luminescence 0=21160
CdS growth from the melt 0=8163
CdS, growth velocity, effect on form 3=25672
CdS, Hall mobility of photoelectrons 4=17528
CdS having metallic contacts, elec. props. 4=12853
CdS, heat-treated in vacuum and O_2 2=4060
CdS, high current density distrib. meas. 2=2158
CdS, under high elec. load, high-temp. layers formation 2=4100
CdS, high-gain photoconductor, trapping 4=4223
CdS, high pressure phase, crystal structure 4=10433
CdS, high-pressure phase structure 3=20834
CdS, high temp. elec. conduction, ionic contrib. 1=17720
CdS, hole injection from Cu_2S 3=25382
CdS, hole mobility and lifetime 2=14550
CdS hollow crystals, growth 4=10470
CdS, hypersonic wave generation 2=23377
CdS i.r. absorption bands rel. to double phonon process 1=17401
CdS, i.r. absorption of ion impurities 1=11380
CdS, i.r. absorption spectrum, phonon peaks 3=10947
CdS, i.r. absorpt. spectrum, polarization effects 2=8533
CdS i.r. emittance rel. to absorption processes, 323° to 473°K 3=10961
CdS, as i.r. optical material 0=2236
CdS, i.r. quenching of thermo-, electrolumin. 0=1768
CdS, illuminated, oscillatory currents under ultrasonic flux 4=7062
CdS, illuminated, u.s. absorpt. and elec. cond. 2=3833
CdS, impulse elec. breakdown 1=17846
CdS, impurity photocond. 2=10523
CdS, impurity scatt. of electrons 4=1598
CdS, impurity states, electron—phonon coupling 3=10733
CdS, induced conductivity, dependence on electron energy 0=11708
CdS, induced i.r. impurity photoconductivity, rel. to local-level parameters 4=1678
CdS, for intensity measurement in electron diffraction 1=11606
CdS, internal friction due to photocond. 2=10739
CdS, intrinsic optical-transitions 1=17445
CdS after ionic bombardment, elec. properties 1=17721
CdS, irradiated, elec. stimulated currents 1=3762
CdS, large crystals, growth and props. 3=17704
CdS, large crystal growth, sublimation method 4=10469
CdS laser excitation by fast electrons 4=21684
CdS, layer-like field inhomogeneities, artificial 4=12888
CdS layers, band in absorption spectrum 1=3837
CdS, layers, fundamental absorption edge 1=3842
CdS, light centres, review paper 4=1526
CdS, linear electro-optic effect 4=13023
CdS, long-wavelength photosensitivity, rel. to heat treatment 3=17954
CdS, longitudinal photocond. 2=23458
CdS, luminescence, anti-Stokes rel. to 2-step optical excitation 2=23593
CdS, luminescence, with added Mn, Fe, Ni, Co, rel. to temp. 2=8553
CdS, luminescence, cathodo 3=23118
CdS, luminescence and defect properties, thesis 1=20014
CdS, luminescence due to 5 keV electron bomb. 1=7725
CdS, luminescence, edge emission, tight-binding model 0=2956
CdS, luminescence, effect of Al traces 1=1177
CdS, luminescence and elec. cond., elec. field effects 0=1746
CdS, luminescence, electric field effects on quenching and enhancement 4=15617
CdS, luminescence with electrolysis 2=4168
CdS, luminescence excitatn. by ions 3=970
CdS, luminescence, exciton stimulation 3=10986
CdS, luminescence: i.r. effect and anti-Stokes emission 3=3049
CdS, luminescence, mechanism 4=4292
CdS, luminescence and photocond., superlinearity 0=16079
CdS, luminescence polarization rel. to colour centres 2=23591
CdS, luminescence of powdered in elec. fields 2=14737
CdS, luminescence rel. to excitons 2=14716

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CdS, luminescence, rel. to originating defects 2=8574
CdS, luminescence rel. to temp., photochem. 3=15705
CdS, luminescence spectrum 2=12617
CdS, luminesc. spectrum due to electron bombard. 2=10630
CdS, luminescence, temp. depend. 0=4437
CdS, luminescence temp. depend. without foreign activators 2=8552
CdS, luminescence, temp. quenching, energy levels 1=6232
CdS, luminescence temp. var. 2=4169
CdS, luminescence temp. var. 4=22916
CdS, mag. field effect on exciton absorption 1=19971
CdS, mag. suscept. of Ni^{2+}, analysis 4=17616
CdS, magneto-optical effects in absorption spectrum 2=4120, 8487, 23527
CdS, magneto-optics of excitons 0=7997
CdS, magnetoresistance, negative, var. with Cl doping 4=12886
CdS, magneto-Stark effect, exciton motion 1=17881
CdS, mechanically-excited emission 0=16119
CdS, mixed ambipolar and exciton diffusion 0=13525
CdS, mobility of carriers, effect of photoexcitation 1=2421
CdS monocrystals in condenser, capacitance change 0=3715
CdS, monocrystals, X-ray reflection variations 0=12040-1
CdS, multiphonon i.r. absorption 4=7116
CdS, n-type, lightly doped, Hall mobility 3=863
CdS, n-type, u.v. excitn., photo e.m.f. 3=2974
CdS, nature of photo-current 4=26146
CdS, near-i.r. fluorescence, electron bombardment effect 1=14653
CdS, negative photoconductivity 3=903
CdS, negative resist. and double-carrier injection 4=12887
α-CdS, neutron diffraction, anomalies due to absorption by Cd^{113} 1=4046
CdS, new etchants to detect dislocations 4=1496
CdS, new rectifier effect 4=30657
CdS, Ni^{2+} and Co^{2+} absorpt. spectra 2=14673
CdS, non-ohmic cond., rel. to u.s. amplification 3=12919
CdS, non-ohmic conductivity 1=1121
CdS, O impurity position in lattice, rel. to semi-insulator props. 0=18041
CdS, ohmic contact photovoltage 2=8435
CdS, ohmic contacts with In 1=14496
CdS, ohmic and nonohmic contacts, photocond. 1=14511
CdS, optical absorpt. and dispersion, 20°K 2=23543
CdS, optical absorption, 4·2°K, and excitons 3=8594
CdS, optical absorpt. of polycrystals, effect of temp. 2=4132-4
CdS, optical double-photon absorpt. 4=15584
CdS, optical harmonic generation, by laser, from second order polarization tensor 4=2809
CdS, optical props. of free electrons 1=17864
CdS, optical props, 0.4-18 μ, impurity effects 3=20469
CdS, optical second harmonic generation, by laser beams 4=28666
CdS, optical study of defect struct. 4=30559
CdS, optically active phonon processes 4=17560
CdS, p-n junction, photovoltaic effect 2=14582
CdS, p-type photoconductivity and infrared quenching 1=10056
CdS, persistent internal polarization, theory 2=4089
CdS, phase transformations, 18 to 35 k bars 4=4502
CdS, phase transition due to pressure 2=16705
CdS, phonon interactions 4=25837
CdS, phonon scatt. from thermal cond. meas. 4=15411
CdS, phosphor activation mechanism 2=6621
CdS, photochemical reactions 3=3407
CdS, photochemistry, from luminescence rise and fall curves 4=7771
CdS, photoconductivity 1=6176
CdS, photoconductivity 1=7666-7
CdS, photoconduction 1=14502
CdS, photocond. 2=12541, 14581
CdS, photocond., a. c. impedance meas. on insulated crystals 0=2906
CdS, photocond., annealed in vacuum and S vapour 0=18068
CdS, photoconductivity, annealed in var. atmos., Al, In, Ag, Cu, Au-doped 1=12459
CdS, in photocond. cell, image sharpness recognition 4=15573

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- CdS, photocond. cells, lifetime and photochem. reactions 1=5031
- CdS photoconductive cells, preparation effects, review 4=7064
- CdS, photoconductivity, cells, slit γ excitation, in gas discharge 4=4228
- CdS, photocond. of cubic and hexagonal crystals 3=6631
- CdS, photoconductivity, current noise and distributed traps 1=7671
- CdS, photocond. decay quenching effect 0=20932
- CdS, photocond. decay time, rel. to temp. and illumination 1=19901
- CdS, photocond., effect of Cu impurity 2=18740
- CdS, photocond., effect of H_2 2=649
- CdS, photocond., effect of probe position 2=21191
- CdS, photocond., effect of strong elec. field 2=10529
- CdS, photocond., effect of X-rays 2=2191
- CdS, photocond., enhanced by i.r. and elec. field 1=14508
- CdS, photocond. evaporated films, props. 4=15567
- CdS, photocond. by excitation in fundamental absorption edge 1=19900
- CdS, photoconductivity excitation spectra 4=10122
- CdS, photoconductivity, exciton structure obs. 4=7063
- CdS photoconductive films, sintered, effect of heat-treatment 1=14505
- CdS, photocond. and γ-conductivity 2=16752, 18736
- CdS, photoconductivity, improved performance, various methods 0=2908
- CdS, photoconductivity, increase near In, Ga contacts 3=17956
- CdS, photoconductivity, infrared quenching 1=14504
- CdS, photocond., i.r. quenching and new peak 2=16751, 18735
- CdS, photocond., influence of H atmosphere 2=648
- CdS photoconductive layers 0=9989
- CdS, photocond. at low temp. 2=18738, 23455
- CdS, photocond., lux-ampere characteristics 1=7669
- CdS, photoconductivity meas. with contact-free microwave method 4=30661
- CdS, photoconductivity, mechanism 4=4292
- CdS, photocond., "memory" effect 0=1677
- CdS, photocond. of monocrystals 2=647
- CdS, photocond. and optical props., review 1=2436
- CdS, photocond. props. 3=23395
- CdS, photocond., quantum yield 4=1681
- CdS, photocond. quenching by photochemical reactions 2=4062
- CdS, photocond. relaxation, effect of trapping levels 0=18067
- CdS, photocond. ref. to trapping processes 2=23453
- CdS, photocond. rel. to imperfections 2=12544
- CdS, photoconductivity response spectrum 1=17794
- CdS, photoconductivity, role of contacts 1=19902
- CdS, photoconductivity sensitization by dye films 1=17797
- CdS, photoconductor, shadow region high-fields 2=23454
- CdS, photocond., slow-growth, trapping cross-sections 1=3785
- CdS, photocond. spectra structure 2=8414
- CdS, photocond., spectral distrib., ambient gas effects 0=9992
- CdS, photocond. spectral distrib. rel. to γ-irrad. 2=10528
- CdS, photocond., spectral response, surface treatment effects 0=15984
- CdS, photocond. spectrum, modulated excitation 3=23012
- CdS photoconductivity structure 1=14510
- CdS, photocond. at 300°, 77°, 20°K 2=18741
- CdS, photocond., 2-4μ, mechanism 0=15985
- CdS, photoconductivity in vicinity of absorption edge 1=5024
- CdS, photocond. during X-irradiation 2=6497
- CdS, photocond., X-ray pulse induced 2=12453
- CdS, photocond. by X-rays, linearity 2=10530
- CdS, photocurrent, effect of shadow region 3=13131
- CdS, photocurrent fluctuations due to shallow traps 0=4369
- CdS, photocurrent kinetics 2=23460
- CdS, photocurrent pulse generation 4=10123
- CdS, photocurrent saturation 0=13630
- CdS, photocurrent saturation meas. 4=10120
- CdS, photocurrent, X-ray effects 2=12545
- CdS, photocurrents at ohmic contacts 3=17953
- CdS, photodielec. effect, 50 c/s-300 kc/s 4=26145
- CdS, photo-e.m.f., sensitized with chlorophyll and analogues 0=1676
- CdS, photoeffects, long-range, rel. to exciton transport 2=23452

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- CdS, photoelectret state in single crystal 4=12971
- CdS photoelec. carriers, schubwegs 4=22795
- CdS, photoelectric emission, nonequilibrium, and photoconductivity 3=19308
- CdS, photoelec. props., effect of admixture of gold 1=19899
- CdS, photoelec. props. effect of admixture of gold 2=4061
- CdS photoelectricity rel. to electrodes and non-symmetrical illumination 1=14503
- CdS, photoelectricity, hole contribution 4=22796
- CdS, photoelectromagnetic effect 2=650
- CdS, photoelectron trapping coefficient β determination 3=13130
- CdS, photoelectronic emission, quantum yield, spectral depend. 2=22252
- CdS, photoelectronic props., with high impurity concn. 3=906
- CdS photoelements, as proton scintillation detectors 1=19063
- CdS, photoemission, exciton induction 2=5372
- CdS, photo induced chemisorption calc., photoconductive gain, response time, meas. 4=30900
- CdS photo resistors 4=17536
- CdS, photoresistors, capacitance, equiv. cct 4=7081
- CdS, photoresistors, dark conductivity 2=21189, 23456
- CdS photoresistors, Ohmic contacts problem 4=12984
- CdS, photoresistors, preparation and characteristics 4=26156
- CdS, photosensitivity and speed of response 1=11324
- CdS, photovoltage model 3=25421
- CdS, photovoltaic anomaly 1=14507
- CdS, photovoltaic effect, at Au or Al contacts 4=15568
- CdS, photovoltaic effects at Ohmic contacts 3=8569
- CdS, photovoltaic effects, rel. to wavelength and optical excitation 4=1680
- CdS, photovoltaic emission from Au and Cu 3=23013
- CdS, photovoltaic potentials with metal-film coatings 3=907
- CdS, piezoelec. consts. 1=10084
- CdS piezoelectric scattering and phonon drag 1=17857
- CdS, piezoelectricity and conductivity 0=16027
- CdS, polarization field decay, photocond. 0=18088
- CdS, polycryst. films, photoconductivity 3=904
- CdS, polycrystalline layers, photosensitivity activation temp. depend. 4=7061
- CdS, polycryst., photoconductivity carriers 3=905
- CdS, polymorphism 3=18233
- CdS, powder, $\beta \to \alpha$ phase transition temperature 4=7477
- CdS, pre-breakdown processes 0=18109
- CdS, precipitated on crystal, structure 0=8207
- CdS, prep. of photosensitive monocrystals 2=16989, 18734
- CdS, pulse photoconducting, effect of background illum. 2=10526
- CdS, in pulsed mag. fields, current-voltage saturation 4=12885
- CdS pure crystals, fluorescence at 4.2°K 0=1744-5
- CdS, pure, low-temp. fluorescence bands 0=11775
- CdS, pure, photosensitivity, spectral depend. 2=10527
- CdS, recombination coefficient 1=3761
- CdS, reflecting power and photoelectric emission 4=1724
- CdS, reflection bands, dispersion effect 3=15652
- CdS, reflection and emission of polarized light 1=10090
- CdS, reflection peaks near exciton line 4=1705
- CdS, reflection spectrum 0=6185
- CdS, reflection spectrum of wurtzite structure 3=8583
- CdS, refractive index, visible spectrum 0=642
- CdS, self-activated semiconductivity, meas. 4=1597
- CdS, semiconducting, electrical pot. distrib. 3=17872
- CdS, shallow traps 2=23375
- CdS, shallow traps, capture cross-sections, modulated light method 1=1105
- CdS, shallow traps, frequency factor and energy distrib. 0=9991
- CdS single crystal, avalanche breakdown 1=10060
- CdS single crystal, current oscillations induced by light irrad., local 4=28640
- CdS single crystal, structure 1=10254
- CdS single crystals, absorption at band edge 0=1724
- CdS, single crystals, contact potential 2=12526
- CdS single crystals, elect. cond. process 0=1664-6
- CdS single crystals, e.s.r. of Cr^{3+} 4=15669

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CdS single crystals, elec. pot. and movement of minority carriers 4=26037
CdS single crystals, electroluminesc. 4=28722
CdS single crystals, fast recomb. at surface 4=26144
CdS, single crystals, fluorescence, polarization 0=11782-3
CdS single crystals, growth from vapour phase 1=10238
CdS, single crystals, introducing additives during growth 3=23395
CdS single crystals, mag. susceptibility 3=4998
CdS single crystals, photoconductivity, effect of infrared 1=7668
CdS single crystals, photoconductivity mechanism 0=13632
CdS single crystals, photoelectric polarization and photomagnetoelectric effects 4=26038
CdS single crystals, precipitation of impurities 4=13479
CdS single crystals, pulse photoconduction, carrier lifetime 1=11322
CdS single crystals, surface states, photoconductivity investigation 4=28421
CdS single crystals, thermally induced conductivity 0=18037
CdS, sintered film, effect of O on photoconduction 1=12458
CdS, sintered layers, photocond. props. 0=2912
CdS, sintered, in photocells and resistors, reversible changes 4=20658
CdS, sintered, in photocond. cells, fabrication 0=2913
CdS, solubility of ZnSe and ZnTe 3=4886
CdS sols., specific heat meas. 0=18443-5
CdS, space-charge-limited current, expt. 3=861
CdS, space charge limited current, noise 3=8520
CdS, space-charge-limited currents 3=25362
CdS, space-charge-limited currents, modulation 3=862
CdS, space-charge limited injection currents 3=2907
CdS, space-charge-limited photocurrents 1=17792
CdS, space charge oscillations 0=6086
CdS, spectra, Raman and i.r. absorpt. 4=17559
CdS, spectrum, reson near absorpt. edge, temp. var., analogue of Mossbauer effect 4=17558
CdS, spectrum at 20°K and 1750 atm. 2=7094
CdS, sphalerite form, elastic moduli 3=18159
CdS, stacking faults 2=18592
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CdS, stacking faults 3=17769
CdS, stark effect on exciton levels 2=4138, 10597
CdS, stoichiometric defects, effect on photocond. 1=14509
CdS, strong acoustoelectric effect, due to piezoelectric coupling 3=8567
CdS, structure changes 4=13508
CdS, surface conductivity by field-effect 1=17799
CdS, surface photovoltage and surface states 2=21190
CdS, surface studies by electron micr. 3=8924
CdS, Te-doped, electroluminescence 4=28724
CdS, thermally-excited currents, heat treatment effects 1=14463
CdS, thermally stimulated conductivity, rel. to trapping levels 4=1595
CdS, thermally-stimulated elec. cond. 0=11674
CdS, thermally-stimulated elec. cond. rel. to prelim. illumination 4=1596
CdS, thermoluminescence 1=6244
CdS, thermo-stimulated currents in γ-ray irrad. monocryst. 2=2128
CdS, thin-film diodes, space-charge-limited and Schottky-emission currents 4=28595
CdS, thin films, elec. cond., rel. to temp. 3=25363
CdS, transparent In elec. contacts 0=16364
CdS, trap density meas. 2=23154
CdS, trapped space charge, thermal release 3=4949
CdS, trapping and diffusion in surface region 0=13631
CdS, trapping level meas., electrical 3=20326
CdS, trapping levels, fast, meas. from photocond. 3=17846
CdS, trapping-state spectroscopy 3=23101
CdS, traps, distrib. and nature investigation 2=10381
CdS, true photoconductivity 3=17955
CdS, type crystals, i.r. transmission spectra 2=21253
CdS-type semiconds., elec. cond. contact-less study 4=26039
CdS, u.s. attenuation at room temp. 4=20199
CdS, u.s. attenuation, 10-200 Mc/s, photosensitivity 0=11574
CdS, u.s., free carrier trapping effect 4=21236
CdS, u.s. propagation 2=4056

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CdS, u.s. wave amplification by d.c. field 2=18784
CdS, u.v. luminescence, photochem. effects 3=3037
CdS, u.v. refl. spectrum, polarization effects 4=4279
CdS, unactivated energy levels and lattice defects 2=10485
CdS, use in u.s. amplifier 4=22488
CdS, valence band structure, quasi-cubic model 1=19983
CdS, vapour-grown, dislocations obs. 2=18585
CdS, X-ray continuous spectrum, Ohlin structure meas. 4=4242
CdS, X-ray diffraction patterns at ultra-high press. 4=15779
CdS, X-ray photoconductivity, spectral distrib. 4=12986
CdS, X-ray spectrum short wave limit 3=4919
CdS, zincblende-type, absorpt. band edge, thermal depend. 4=17557
CdS:Ag, cathodoluminescence, rel. to preparation materials 2=23616
CdS : Ag, photoconductivity 3=20394
CdS; Au and Cu doped photocells; conducting electron origin 2=10542
CdS:Au, fluorescence 0=16096
CdS—CdSe, Ag-activated, photocond. 2=18739
CdS—CdSe, photocond., i.r. quenching, temp. and composition depend. 1=6177
CdS, CdSe, photocond. and luminescence at low temps. 2=8413
CdS-CdSe photoconductors, transient effects 3=2972
CdS—CdSe solutions, edge photoluminescence 1=9004
CdS.CdSe, crystal growth, rel. to photo and dark cond. 1=14963
CdS$_x$ CdSe$_{1-x}$ mixed crystals, spectrum 2=6552, 10596
CdS$_x$CdSe$_{1-x}$, ohmic and nonohmic contacts, photocond. 1=14511
CdS$_x$.CdSe$_{1-x}$, photocond., spectral distrib., absorption, 20° and 77°K 1=1104
CdS—CdTe, preparation, structure and properties 0=621
CdS:Cu, hole conduction and photovoltaic effects 0=4356
CdS—Cu, red electroluminescence 4=7190
CdS:Cu, ultrasonic transducer with diffused layer 3=9566
CdS: Cu, Cl, photoconductivity, i.r., optical activation 4=28639
CdS:Cu, Ga, photosensitive centre, e.s.r. study 3=23224
CdS:Eu (II), e. s. r., crystal field splitting of ^8S state 0=21071
CdS:Fe, spin resonance, photosensitive, at 4.2°K 0=536
CdS:Ga:Cu, photoconductivity, rel. to hole ionization energy of imperfections 0=1663
CdS:I, vapour-grown, after-treatment effects 2=6495
CdS:I:Cu crystals, photoconductivity gain rel. to photon energy 4=12985
CdS:Mn, paramag. resonance at 4.2 and 300°K 0=13872
CdS:Se, photoconductivity, exciton structure obs. 4=7063
CdS:Se, spin-orbit splitting 2=20956
CdS$_x$Se$_{1-x}$ films, photovoltaic effect, (x from 0 to 1) 4=12982
CdS$_x$Se$_{1-x}$, photo-e.m.f., vert. illum., spectrum, var. with x 3=23015
CdS$_x$Se$_{1-x}$ photovoltaic effect, spectral distrib., (x from 0 to 1) 4=12983
Cd(S:Se):Cu, photocond. spectral response 1=14506
CdS:V, 2μ fluorescence, excitation spectra 0=13715
CdS—ZnS, structure and electroluminescence 1=9012
CdS, in ZnS phosphors, effect on luminescence 0=11784
CdS—ZnS, photocond., 3400-5100A 2=6502
CdS$_x$. ZnS$_{1-x}$ mixed crystals, spectrum 2=6552, 10596
CdS—ZnS, Ag and Cu activated, optical props. 0=6161
CdS. ZnS : Cu : Ag, photodielectric properties 1=7686
CdS:ZnS:Mn, α-ray luminescence, effect of elec. fields 1=14656
CdS:ZnS:Mn, luminescence due to α-rays and a.c. field 1=14655
CdS:ZnS:Mn, various effects on luminescence 2=728
CdS. ZnS: Mn, X-ray luminescence, a.c. field enhancement 1=3862-3
CdS—ZnS—NaCl 2%, luminescence emission bands 2=716
CdS—ZnTe heterojunctions, I—V characteristics 1=14483
Cd—Cd*SO$_4$ soln., isotopic exchange reaction with Cd^{115} tracer 2=21589
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- CsBr, F-centres optical props., mag. field effects 4=28499
- CsBr, F, mag. dichroism 4=25971
- CsBr, rel. to photoconductivity 4=4231
- CsCl, absorption, 0.175-3.5 μ 1=992
- CsCl, electron irrad., e.s.r. of unidentified centre 2=4253
- CsCl, F, mag. dichroism 4=25971
- CsCl, levels, exoemission data 3=14618
- CsF, F peak energy calc. 4=30586
- CsI, absorption, 0.175-3.5 μ 1=992
- CsI, F and M centres, absorpt. spectra rel. to pressure 4=15502
- Cu–Ag–Au alloys, reflection spectra rel. to plastic deformation 4=1719
- Ge-doped quartz, mag. resonance studies 1=20201
- K azide, nature and mechanism of formation 0=8008
- K halides, additively coloured, F-centres, short-wave absorption 0=17965
- K halides, effect of Tl doping on F and V-centres 0=16065
- F, in K halides, electrical effects 4=20314
- K halides, F- and M-centre processes, photochemical 4=10003
- K halides, F-centres, rel. to photocond. 2=8424
- K halides, nitrogen centres, e.s.r. meas. 4=26416
- KBr activated with In^+ and Sn^{++} 0=10065
- KBr, due to X-rays, near fundamental edge 3=15517
- KBr, electrolytic coloration 0=6054
- KBr, electron and photon absorption compared 1=11189
- KBr, F-centre absorpt. and emission, temp. depend. 4=25970
- KBr, F-centres, capture cross-section 2=23468
- KBr, F-centres, electron–nuclear double reson. 2=12471
- KBr, F-centre, electron–nuclear double spin res. 2=6388
- KBr, F-centre formation by neutron irrad. 1=12468
- KBr, F-centre ground-state, calc. 1=14335
- KBr, F-centre growth, exciton-induced 1=17576
- KCl, F-centre growth kinetics 0=4301
- KBr, F-centre lifetime 2=6387
- KBr, F-centres, optical pumping 4=10000
- KBr, F-centre prod. efficiencies at. liq. He temp. 4=12810
- KBr, F-centres, pulse photoconductivity 1=11232
- KBr, F^1-type absorption bands 3=22840
- K Br, F'-type new absorption bands 3=815
- KBr, F- and V_2 -centres rel. to fast-electron irrad. 4=1651
- KBr, F_2^+-centres 3=20240
- KBr, H centre recomb. with electron 4=28733
- KBr, H, V and F centres, low-temp. props. 0=9910
- KBr, hydroxyl and U-centres, additively coloured 3=13013
- KBr and KBr : Ca, M and R centres 1=14341
- KBr, KCl, F_A, excited, lifetime 4=25974
- KBr, Li A-centres ENDOR study 3=25299
- KBr, M-band, temporary bleaching 4=20317
- KBr, rel. to luminescence 2=711
- KBr, trapped-hole centres due to electron pulses 3=8460
- KBr, U_2-centre, e.s.r. and photochem. 3=10696
- KBr, U-centres, exciton induced photoconductivity 1=14340
- KBr, U-centres, i.r. absorpt. 3=13014
- KBr, U-centres, i.r. absorption meas. 4=1531
- KBr, U → F conversion , quantum yield 1=8917
- KBr, u.v. irrad. at 15° K, photochemically produced centres 1=7601
- KBr, V-centres in crystals containing Ca, Sr, Ba ions, e.s.r. and optical absorption 0=6051
- KBr, V_1 centres, photochemistry 1=7602
- KBr, V_4-centre, bleaching and symm. props. 2=18621
- KBr, X-irradiated, effect of impurity ions 2=2077
- KBr, Z_2 centres, absorption peaks rel. to Ca, Sr, Ba doping 4=28501
- KBr :KH, U_1-centres, absorption, effect of interstitials 4=7149
- KBr—KI mixed crystals, F-bands 3=4889
- KBr:Na, A-centres, bleaching and dichroic props. of A_1 and A_2 bands 4=6884
- KBr: Tl, diffusion in K vapour 2=3956
- KBr: Tl, X-ray induced, at low temp. 0=1596
- KCl crystal A-centres 1=11233
- KCl, A-centres 1=14339
- KCl, A-centres, e.s.r. 2=21365

Colour centres—contd
KCl, A-centres due to substitutional Na ions 1=17573
KCl, A-centres formation 2=10418
KCl, A-centres, structure and properties 1=19810
KCl, A- and B-centres, formation, nature and props. 2=607
KCl, A- and B-centres, reversible optical conversion 1=17572
KCl, additively coloured, F → M centre conversion 0=20833
KCl, additively coloured, M-centre formation 3=4892
KCl, alpha and beta bands 1=993
KCl, bleaching at 77°K by F-band irrad. 3=6543
KCl containing Ca^{2+} and Sr^{2+}, Z-centre energy levels 4=28500
KCl, containing Sr, F, Z_2 3=23235
KCl, containing U centres thermal bleaching 1=11242
KCl, divalent-doped, Z_1 centres, growth and bleaching 3=22846
KCl, due to X-rays, near fundamental edge 3=15517
KCl, due to X-rays, after prior ionizing irradiation 2=6385
KCl, e.p.r. props. of pure and bleached F-centres 2=6386
KCl, e.s.r. 3=23234
KCl, electron excess centres, e.s.r. and optical absorption 1=14330
KCl, electron and photon absorption compared 1=11189
KCl, F-aggregate centres, thermal prod. 3=4891
KCl, F-aggregates, equil. with F-centres 4=22631
KCl, F-band bleaching, photoconductive sensitivity 4=20431
KCl, F-band, complex nature 1=17575
KCl, F-band, rel. to electron bombardment 3=17808
KCl, F-band growth in deformed and heat-treated crystals, due to X-ray irrad. 1=996
KCl, F-band illumination, photocurrent carrier mobility 1=1108
KCl, F-centre absorpt. and emission, temp. depend. 4=25970
KCl, F-centre, absorption band shape 4=12809
KCl, F-centres, aggregation, e.s.r. meas. 3=25302
KCl, F-centres, assoc. absorption band 2=12600
KCl, F-centre association with Na^+ or Li^+, kinetics 4=10004
KCl, F-centres, bleaching and recovery by X-ray irrad. 1=3693
KCl, F and complex, X-ray prod. 3=25297
KCl, F-centres, config. coord. model 2=23219
KCl, F-centre diffusion into crystals during additive colouring 0=20838
KCl, F-centre diffusion, effect of dislocations 2=3964
KCl, F-centre diffusion rate, effect of deformation 1=8919
KCl, F-centres due to O, e.s.r. study 2=12373
KCl, F-centres, e.s.r. double-reson. meas. 4=22632
KCl, F-centre e. s. r. line contours 4=10330
KCl, F-centres, e.s.r. line width temp. depend. 4=1527
KCl, F-centres, e.s.r., saturation and partial recovery at 4°K 6=10236
KCl, F-centres, effect on elec. cond., rel. to temp. 2=12500
KCl, F-centres, effects in electrification of crystalline dust by β-irrad., 2=8255
F-centres, KCl, electron and γ-irrad., hardening 3=23359
KCl, F-centres, electron–nuclear double spin res. 2=6388
KCl, F and F_A centres, electronic–vibrational state interaction 3=22839
KCl, F and F'centres, fluorescence concentration dependence 4=4303
KCl, F → F' conversion in presence of other centres, quantum efficiency 1=11236
KCl, F–F' photoequilibrium, kinetic model 2=12470
KCl, F ⇌ F' reaction and F' lifetime 3=2840
KCl, F- and F'-centres, rel. to photocond. 2=10535
KCl, F-centre formation by heating in K vapour, mechanism 1=11240
KCl, F-centres, formation and optical bleaching, rel. to impurity effects 3=22841
KCl, F-centres, by γ-ray irrad., lifetime 4=17450
KCl, F-centre lifetime 2=6387
KCl, F-centres, light exposure effects, electron microscope study 0=743
KCl, F-centres, low-temp. optical bleaching 1=8915
KCl crystals, F' centres luminescence in i.r. 4=22921
KCl, F and M centres 0=20937
KCl, F- and M-centres, dynamic equilibrium 2=21082
KCl crystals, F-centre to M-centre photochemical conversion kinetics 4=25972

Colour centres—contd
KCl, F and M-centre prod. by electrons 3=8461
KCl, F and M, production, props. 1=19815
KCl, F, M, R-centres, prep., props. and models 3=2836
KCl, F-, M- and V-centres prod., plastic deform. effect 4=10002
KCl, F and M centres, radiation equilibrium model 4=17451
KCl, F and M centres, review paper 4=1526
KCl, F-centres, Na impurity effect 4=30585
KCl, F-centres, opt. absorption and e. s. r. after bleaching 2=3963
KCl, F-centres, optical props., rel. to vibrational mode analysis 0=13486
KCl, F-centres, optical transitions on illumination causing flow stress changes 4=13392
KCl, F-centres, photocond. 2=8423
KCl, F-centre photoconductivity, decrease on bleaching 0=13553
KCl, F-centres, photo creation and destruction 0=15859
KCl, F-centres, photoelec. Hall effect, 4-114°K 1=5028
KCl, F-centre prod. efficiencies at. liq. He temp. 4=12810
KCl, F' centres, radiative tunnelling rel. to thermoluminescence 1=20034
KCl, F'-centres, radiative tunnelling rel. to thermoluminescence 2=4194
KCl, F-centres, rel. to breakdown 3=23020
KCl, F-centres, rel. to critical shear stress 0=3156
KCl rel. to elec. cond. 0=15880
KCl rel. to exo-electron and photoelectric emission 1=18920
KCl, F-centres, rel. to inducing X-ray intensity 3=6545
KCl, F-centre, spin-lattice relaxation 1=20242
KCl, F-centre spin–lattice relax. 4=26421
KCl, F-centres, spin–lattice relaxation, calc. 1=20244
KCl, F-centres, spin–lattice relaxation times, temp. dependence 4=4405
KCl, F-centres, spin resonance, optical saturation at 2.1°K 1=14333
KCl, F, struct. magneto-optical study at 1.86°K 4=17449
KCl, F-centres, thermal bleaching 2=19171
KCl, F-centres, thermal dissociation energy 1=994
KCl, F-centres, thermoluminescence, bleaching, effect of impurities 3=20246
KCl, F^1-type absorption bands 3=22840
KCl, F'-type new absorption bands 3=815
KCl, F-centres, X-ray coloration and optical bleaching, light intensity depend. 0=15861-2
KCl, γ-irrad., F-centre bleaching complex centre formation 2=10420
KCl crystals, γ-irrad., thermal bleaching of colour centres, influence of plastic deformation 4=30584
KCl, H centre recomb. with electron 4=28733
KCl, H, V and F centres, low-temp. props. 0=9910
KCl, hardening by colour centres 3=22833
KCl, Harshaw, gamma-ray effect vars. in different samples 4=1525
KCl, heavily γ-irrad., F- and M-band absorption 3=816
KCl, hole F-centres, energy and Ψ-function 1=14334
KCl, K-centres, Na impurity effect 4=30585
KCl, K-centres, prod. and dichroism 2=18618
KCl and KCl : Sr, M and R centres 1=14341
KCl, levels, exoemission data 3=14618
KCl, M-band oscillator strength, thermal stability of R, N and M-centres 1=999-1000
KCl, M band, temporary bleaching 4=20317
KCl, M-centre diamagnetism, no e.s.r. 2=3966
KCl, M-centres, electron spin resonance 1=11241
KCl, M-centres, electron trapping to give M! 2=18619
KCl, M-centres, metastable triplet state e. s. r. 4=4408
KCl, M-centres, optical absorption 1=17581
KCl, M-centres, preferential bleaching with polarized light 0=20834
KCl, M-centres, temporary bleaching effect 4=1530
KCl, M, N and R_2 centres, pressure effects to $\sim 10^4$ atm 0=13556
KCl; M, R, N, temporary bleaching 3=818
KCl, magnetic props. of imperfection centres 2=6652
KCl, motion of F-centres 3=6544
KCl, N_1 band, dichroism 2=18620
KCl, N- centres 3=820
KCl, new absorptions 4=25973
KCl, optical bleaching 1=14338

Colour centres—contd
KCl, optical bleaching near 0°C, temp. depend. 0=11633
KCl, pure Harshaw, F- and V_3-centres, by γ-irrad. 4=10005
KCl, R centre, by X-irrad., e.s.r. 4=17452
KCl, recombinations, rel. to glow luminescence 3=969
KCl, rel. to γ-irrad 3=22842
KCl, rel. to luminescence 2=711
KCl, shape of F-band absorption 0=6180
KCl, spin–lattice relaxation 1=20245
KCl, spin–lattice relax. at low temps. 2=14471
KCl, temporary optical bleaching 1=17574
KCl, thermal bleaching 0=11635
KCl, thermal bleaching 1=14337
KCl, thermal equilibrium between F- and M-centres 0=7893
KCl, trapped-hole centres due to electron pulses 3=8460
KCl, u.v. irrad. at 15°K, photochemically produced centres 1=7601
KCl, U_2-centres, electronic structure, point-ion lattice model 0=20832
KCl U-centres, exciton-induced photoconductivity 1=10019
KCl, U-centres, exciton induced photoconductivity 1=14340
KCl, U → F conversion, quantum yield 1=8917
KCl, U-centres, i.r. absorpt. 3=13014
KCl, U-centres, i.r. absorption meas. 4=1531
KCl, U_2-centre, e.s.r. and photochem. 3=10696
KCl, V-centres in crystals containing Ca, Sr, Ba ions, e.s.r. and optical absorption 0=6051
KCl, V- and F-centres, thermal bleaching 2=12472
KCl, V_1 centres, photochemistry 1=7602
KCl, V_2-band, effects of plastic and elastic deform. 4=20318
KCl, V_3-centres due to X-rays, origin 2=16671
KCl, V_3-centres, prod. by X-ray irrad. 1=17583
KCl, V_3 centres, u.v. light bleaching meas. 4=22636
KCl, V_4, rel. to u.v. absorption spectrum 3=3013
KCl, X-ray induced conversion in absorption bands 1=17580
KCl, X-ray irrad., effect on elec. conductivity 0=11658
KCl, X-ray irrad., stimulated luminescence, M-centre mechanism 1=14633
KCl, X-ray produced at 5 and 78°K, effect of plastic deformation 0=6050
KCl, Z-centre formation 1=17584
KCl, Z centres 4=15503
KCl, Z_2 centres, absorption peaks rel. to Ca, Sr, Ba doping 4=28501
KCl, Ca-doped, F-centre formation 2=16670
KCl:Ca, X- and γ-irradiated 0=2938
KCl: Ca, X-ray irrad., Cl_2^- centres, thermal bleaching 1=997
KCl, Cu-doped 1=14336
KCl—KBr mixtures, due to 3 MeV electrons 3=10693
KCl—KF mixed crystal, FCl^- hole centre meas. 4=6887
KCl, Li A-centres ENDOR study 3=25299
KCl:Li, A centres, e.p.r. 2=14470
KCl:Li, Na, F_A radiative lifetime, temp. var. 4=12811
KCl:LiCl, A-centre, dichroism meas. 3=17794
KCl, NaCl-doped, band due to colloidal K–Na alloy 1=17585
KCl–NaCl, mixed crystals, X-irradiated, F-band position 0=557
KCl:OH, additively coloured, dichroism 2=10419
KCl:Pb, Cl_2^- centres, thermal bleaching 2=14476
KCl—RbCl mixed crystals, F-centres, e.p.r. 4=20315
KCl—RbCl mixtures, due to 3 MeV electrons 3=10693
KCl, Sr^{2+} doped, F- and V_2-centres, by γ-irrad., formation rel. to Sr^{2+} conc. 4=10005
KCl:Sr, F and Z_2 centres, thermal equilibrium 0=9912
KCl:Sr, Z-bands, dichroism 1=8918
KCl: Sr, Z_1-centres absorption, e.s.r. 3=25304
KCl:Tl, F-centre, formation mechanism 2=16848
KCl:Tl, N- and O-centres 0=15860
$KClO_3$, X-ray irrad., V-centre structure 0=2825
KF, F-centres, electron-nuclear double spin res. 2=6388
KI coloured with I_2, ionic conductivity 4=28618
KI, effect on elec. conducting 1=14389
KI, F-band growth due to X-rays, temp. depend. 4=17423
KI, F-band, rel. to electron bombardment 3=17808
KI, F-centre absorpt. and emission, temp. depend. 4=25970
KI, F-centre, electron–nuclear double spin res. 2=6388
KI, F-centre growth, exciton-induced 1=17576

Colour centres—contd
KI, F-centres, e.s.r., 4-293°K, compared to other K halides 0=1826
KI, F-centre lifetime 2=6387
KI, F-centres, optical aggregation 0=1597
KI, I_2 centre, e.s.r. 2=21083
KI, luminescence and X-ray dose 2=10617
KI, motion of F-centres 3=6544
KI, R' centres, Gyulai–Hartly effect 2=4067
KI, rel. to luminescence 2=711
KI:Tl, X-ray induced, at low temp. 0=1596
$LaCl_3$ containing $Pm^{147}Cl_3$ 0=11787
LiCl, F-centre electronic structure 1=11238
LiCl, F-centres, excited states, calc. 4=6885
LiCl, F-centres, optical absorption and e.s.r. 1=995
LiCl, M-centres, electronic structure calc. 4=12813
LiF 3=22836
LiF, coloration layer after deuteron irrad. 4=4082
LiF, coloration by various radiations 3=25298
LiF containing Mg, optical absorption 4=15501
LiF crystals, optical bleaching of R-bands 1=10102
LiF, effect on nuclear spin–lattice relax. 2=10710
LiF, F band, isotope effects meas. 4=22633
LiF, F-centre absorption rel. to γ-ray-induced expansion 4=4099
LiF, F-centres, absorption rel. to irradiation 1=19964
LiF, F-centres, e.s.r. study 3=11114
LiF, F-centres, effect on lattice thermal conductivity 0=11632
LiH, F-centre formation 2=14473
LiF, F-centre formation by neutron irrad. 4=9946
LiF, F-centres, h.f.s. from e.s.r., M-centre resonance discounted 0=18217
LiF, F-centre, localized electronic states 2=3874
LiF, F-centre prod. efficiencies at. liq. He temps 4=12810
LiF, F-centres, sharp absorpt. lines meas. 3=814
LiF, F_2^- centres, rel. to specific heat 3=15439
LiF, fluorescence and F-band excit. 4=4302
LiF, γ-irrad., F and M-centres 3=25300
LiF, identification 3=10694
LiF, irradiated, e.s.r. amd rapid passage 0=16171
LiF, irrad., F-centres and additional paramag. centres, e.s.r. study 1=3935
LiF, by irradiation, line and band spectra 3=6540
Li colloidal specks in LiF, due to n-irradiation 4=6901
LiF, luminescence centres induced by X-irradiation 1=20051
LiF luminescence at 77°K after X-rays 0=1749
LiF, M-centres, electronic structure calc. 4=12813
LiF, M-centres, rel. to neutron-irrad. 3=22868
LiF, with Mg^{2+} impurity, due to γ-rays 2=12481
LiF, neutron-irrad. 2=23158
LiF, neutron irrad., e.s.r., two types of centre 1=20219
LiF, pure and doped, F, M and R rel. concns. 2=14472
LiF, R-centres 1=19814
LiF, rel. to flow stress, interstitial mech. 3=2835
LiF, rel. to thermal bleaching 2=16668
LiF, review 4=1458
LiF, trapped-hole centres due to electron pulses 3=8460
LiF, V-centre, h.f.s., e.s.r. study 0=4298
LiF, V_k centre, energy and wave functions 4=17453
LiF, X-irrad. 0=2836
LiF, X-irrad., absorpt. spectrum at 20°K 4=28695
LiF, X-irrad. effects, low-temp. annealing 4=15505
LiF, X-irrad., electronic structure of "antimorph" of F-centre, by e.s.r. 6=6053
LiF, X-ray irrad., F-centre antimorph, e.s.r. 1=20217
LiF, X-irrad., i.r. absorption, phonon-free transitions 4=17573
LiH, absorption 1=17578
LiH colloid centres, e.s.r. 0=1598
LiH, F-centres in, e.s.r. study 1=19811
MgO, F-centres, Γ_1^+ and Γ_4^+ state wave functions 3=25301
MgO, F-centres, spin–lattice relaxation 3=817
MgO, rel. to irradiation 3=22717
MgO, by X-rays, role of impurities 2=12464
NH_4Cl, electron-deficiency centres, e.s.r. meas. 4=10006
Na azide, centres identified as colloidal Na 0=16063
Na azide, nature and mechanism of formation 0=8008
Na cyanamide, by electron or u.v. irrad. 4=17448
Na^+ ion, association to form A and B-centres 2=607
Na silicate glass, induced absorption bands, rel. to radiation and impurities 2=16667

Colour centres—contd
- NaBr, F, struct. magneto, optical study at 1.86°K 4=17449
- NaBr, rel. to elec. cond. 0=15880
- NaCl, alpha and beta bands 1=993
- NaCl, coloration by exoelectrons 2=12469
- NaCl containing Ca^{2+} and Sr^{2+}, Z-centre energy levels 4=28500
- NaCl crystals due to electron bombardment 1=17570
- NaCl crystals, elec. field effect on photostimulated exoelectron emission 4=24721
- NaCl, divalent addns., luminescence, absorpt. props. 3=813
- NaCl, due to electron bombardment 2=9623
- NaCl, effect of irradiation intensity on F-centre production 2=18616
- NaCl, F-band breadth, calc. 0=13554
- NaCl, F-band, after X-ray irrad. 4=15510
- NaCl, F-centre absorption due to pressure 2=8254
- NaCl, F-centre absorpt. and emission, temp. depend. 4=25970
- NaCl, F', and absorption, u.v., β-band maxima calc. 3=20487
- NaCl, F-centres in additively coloured crystals 0=9911
- NaCl, F and complex, X-ray prod. 3=25297
- NaCl, F-centre concentration rel. to previous heat treatment 1=11326
- NaCl, F-centre concn. and relaxation time, by microwave Faraday rotation 0=16161
- NaCl, F-centres due to γ-rays and neutrons 3=8427
- NaCl, F-centre, electron–nuclear double reson. 2=12471
- NaCl, F-centres, electron spin resonance 0=8087
- NaCl, F-centre electrons, spin–lattice relaxation time, 300°K 0=16160
- NaCl, F-centre formation by neutron irrad. 1=12468
- NaCl, F-centre formation by X-rays 3=13011
- NaCl, F-centres, and nuclear relaxation 2=782
- NaCl, F-centres, optical decomposition, effect of
- NaCl, F-centres, origin by X-irrad. 3=15518
- NaCl, F-centre prod. efficiencies at. liq. He temp. 4=12810
- NaCl, F-centres, rel. to optical and elec. props. 0=18072
- NaCl, F-centres rel. to X-ray, photoconductivity 3=4955
- NaCl, F, struct. magneto-optical study at 1.86°K 4=17449
- F, U, in NaCl crystal, optical props. 2=608
- NaCl, F-centres after X-irrad., stored energy 3=2839
- NaCl, F, X-ray formation 3=22844
- NaCl, F-centres, by X-ray irrad. 4=12768
- NaCl, by γ-radiation, Zeeman effect search 4=30583
- NaCl, H centre recomb. with electron 4=28733
- NaCl, irrad., vacancies detection 0=1594
- NaCl, levels, exoemission data 3=14618
- NaCl, nitrogen centres, e.s.r. meas. 4=26416
- NaCl, powder, due to press. and temp. effects 2=12467
- NaCl, rel. to elec. cond. 0=15880
- NaCl, rel. to luminescence 2=711
- NaCl, rel. to thermal bleaching 2=16668
- NaCl, shape of F band absorption 1=10017
- NaCl structure, F-centre, paramag. resonance theory 0=11950
- NaCl, trapped-hole centres due to electron pulses 3=8460
- NaCl, U-centres, transition energies, calc. 1=4999
- NaCl, U_2-centre, e.s.r. and photochem. 3=10696
- NaCl, undoped and doped, X-ray irrad. 0=2824
- NaCl, X-irradiated, production mechanism 0=17963
- NaCl, X-ray irrad., anion vacancy conc. 2=8256
- NaCl, X-ray irrad., coloration 4=17464
- NaCl, X-ray irrad., impurity effects in photoconductivity 2=18752
- NaCl, Z-centre formation 1=17584
- NaCl, Z_2 centres, absorption peaks rel. to Ca, Sr, Ba doping 4=28501
- NaCl:Ag, F-bands at 3600 and 6600 A, X-ray coloured 2=10422
- NaCl : Ag and :Ag, Ca; F-, Ag colloid- and B-bands 4=22629
- NaCl: Ca, Cu, Ag doped, Z-centres 2=8563
- NaCl, with Ca impurity, Z-centres 1=3694
- NaCl: Ca, Z-centres and exoelectron emission 2=6390
- NaCl: Cd, various electronic processes 1=4998
- NaCl—$CdCl_2$, F-centres, by X-ray irrad., formation rel. to impurity content 4=10001
- NaCl, Cu-doped 1=14336

Colour centres—contd
- NaCl, KCl mix-crystals, F-bands 2=3965
- NaCl—$MnCl_2$, F-centres, by X-ray irrad., formation rel. to impurity content 4=10001
- NaCl:Ni, F-centres, rel. to optical flash decay 2=14709
- NaCl—$PbCl_2$, F-centres, by X-ray irrad., formation rel. to impurity content 4=10001
- NaCl: Sr, Z-bands dichroism 1=8918
- $NaClO_3$, X irrad. 4=4083
- NaF, F- and M-bands, prod. by irradiation 1=14594
- NaF, F-centre structure 3=20241
- NaF, M-centres, paramagnetism question 3=819
- NaF, X-ray irrad., temp. effects 4=28495
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CdTe—CdSe alloys, rel. to composition 4=22706
CdTe—HgTe 1=3708
CdTe—HgTe system 1=14464
Ce, and phase transformation meas. 4=4503
Ce, resistance, 10°-300°K, up to 10 000 kg cm^{-2} 2=14490
Ce, resistance, 10°-300°K, up to 10 000 kg cm^{-2} 3=6558
Ce soln. in molten CeI_3 3=21404
Ce hydride, rel. to composition 4=20328
CeO_2, heat-treated 0=606
CeS, meas. rel. to temp. 4=6952
Ce_2S_3, meas. rel. to temp. 4=6952
Ce_2S_3, 20-1000°C 4=4161
Ce_3S_4, meas. rel. to temp. 4=6952
$Ce_{3-x}S_4$, x = 0-0.3, semimetallic, meas. rel. to theory 4=10047
$Ce_{3-x}S_4$, x > 0.3, analysis rel. to temp. 4=10048
Co films, rel. to crystallinity 1=14366
Co films, 0-500°C, structure transformations 1=14367
Co films, resistance rel. to thickness 3=15539
Co, spin-wave scatt. at low temps., meas. 4=1553
Co, temp. depend. 1.3°-4.2°K, singularity 4=6925
Co, thin films 3=17822
$CoAl_2O_4$, ionic and electronic 3=15589
CoAsS, temp. var., and paramagnetism 3=6601
$CoCr_2O_4$, ionic and electronic 3=15589
Co—Fe and Ni—Fe alloys, resistivity, freq. depend. 0=4486
$Co_{1-x}Fe_xSi$, semimetal props. meas. 4=17486
Co—Mn spinels, with Li, Ti, Cu oxides 1=14357
Co—Mn spinels, mechanism, cation dependence 1=14357
CoO, high-pressure effects 1=1024
CoO—NiO—O_2 semiconducting mixtures 0=15950
Co—S 3=25734
$CoSb_3$, with Sn, Te and Ni impurities 0=10006
$CoSe_2$, metallic 1=3769
CoSi, −200°-+1200°C meas. 3=25427
$CoSn_2$, theory 0=13577
Cr, rel. to Cr carbides 2=23378
Cr, films, resistivity 3=18382
Cr, resistivity near Néel temp. 1=10024
Cr, solid and liquid 4=11212
Cr, rel. to temp. and ext. mag. field, 150-310°K 4=6924
Cr—Al liquid alloys, rel. to Cr conc. and temp. 4=8181
Cr borides, carbides and nitrides 1=3707
Cr—Fe liquid alloys, rel. to Cr conc. and temp. 4=8181
Cr—Fe—F liquid alloys, rel. to Cr conc. and temp. 4=8181
Cr—N alloys, dilute 3=6865
Cr nitrides 3=865
Cr—Ni alloy, rel. to ordering 0=8271
CrO_2, anomaly at Curie temp. 1=14395
Cr_2O_3, kinetics of Nb_2O_5, V_2O_5 donor addition 4=30535
Cr_2O_3, rel. to neutron irrad. 4=10049
Cr_2O_3, single crystal 4=26099
CrS_X (x = 0.95-1.20) 1=14465
CrSb, temp. depend. 0=1612
Cr—Se system, rel. to structure 4=1549
CrSe, both quenched and annealed, anomalies 2=23686
$CrSe_X$, 1.00 ≤ x ≤ 1.33, rel. to temp. 4=22763
Cr silicides, solid and liquid, var. conc. 4=11212
$CrSi_2$, rel. to semicond. props. 4=20357
$CrSi_2$, −200°-+1200°C meas. 3=25427
$CrSi_2$—$MnSi_2$ 1=3797
$CrTe$, temp. and press. depend. 1=17619
Cr—Te—Se 1=17619
Cs, effect of Debye—Waller factor 1=4974
Cs plasma, effect of electrode film barriers 3=21820
Cs plasma, weakly ionized 3=12186
Cs, rel. to pressure 4=12854
CsAu, resistivity 3=20328
CsBr, rel. to ionic diffusion coeffs., 300-550°C 0=9917
CsBr single crystals, transport number, 350-450°C 0=9948
CsCl, 230°-500°C 2=12449
CsI, ionic defect model 2=14508
CsI, rel. to ionic diffusion coeffs., 300-550°C 0=9917
Cs—Sb films, rel. to composition 3=8495
Cs—Sb layers, var. with Cs content 3=8574
Cs—Sb, temp. depend. 0=1667
CsSb and Cs_3Sb 0=11709
Cu, anomalous Lorenz parameter 2=21095
Cu, cold-worked 0=15888
Cu, and crystal point defects, due to α-rays and cold working, temp. var. 3=17816

Conductivity, electrical—contd
Cu crystal whiskers, low temp. min. 4=17478
Cu, dislocations, Thomas–Fermi model 3=2801
Cu, effect of elastic stress after plastic deformation 2=23232
Cu, effect of O_2 chemisorption 2=14591
Cu, effect of interstitial atoms 2=16643
Cu, effect of transition metal solutes over wide temp. range 1=17605
Cu, effects of deformation at very low temps. 2=14492
Cu, 82°-295°K, rel. to microcharacteristics 2=16624
Cu, electron irrad. effects at 10°K 0=6066
Cu, electron-irrad., resistivity stage I recovery, rel. to foreign solute atoms 2=21097
Cu, electron scatt. by vacancies, pseudo potential method 4=6771
Cu, electrotransport mobility of Sn impurities 3=8433
Cu, excess resistivity, calc., strain scattering by vacancies and impurities 0=9904
Cu films, after quench-condensing 2=23242
Cu, films, quenching condensation, disorder energy 0=3278
Cu, films, with SiO, LiF, Cu_2O, Fe admixtures 0=3283
Cu films, surface, on supercond. Sn 4=22672
Cu, 4.5°K, resistivity, rel. to irradiation 3=10698
Cu, granular films, flicker effect 3=15540
Cu, and hardness, changes on coldworking 3=13373
Cu, in InSb, diffusion mechanisms 3=17783
Cu, isochronally annealed, cooling rate, hydrogen—vacancy interaction effect 4=30606
Cu, Lorenz parameter, anomalous, at He temps. 4=17471
Cu, low temp. min., effect of Sn, Fe impurities 4=20330
Cu, rel. to oxidation and reduction up to 600°C 3=2012
Cu, plastically deformed, relaxation behaviour 4=10025
Cu powder, cold pressed, rel. to temp. 2=6785
Cu, pure, residual resistance ratio 2=18632
Cu, resistivity at low temp. 0=2845
Cu, resistivity recovery after electron bombardment at 4·2°K 3=8468
Cu, resistivity of stacking faults 0=20794
Cu, scattering cross-sections and charges of impurity ions 3=17813
Cu semitransparent films 1=1142
Cu, with spherical voids 0=4318
Cu, surface enriched with Cr, Ti, Si, B or Ni 4=28535
Cu, thin granular films, flicker effect 2=8280
Cu, 2-4°K, Lorenz number 0=15885
Cu, with vacancies 3=15481
Cu vapour, calc. 2=21949
Cu, very thin films 2=14496
Cu, wire, recovery after cold working at 78°K 3=20266
Cu–Al, after quenching 2=23882
Cu–Al alloys, near solubility boundary 3=5132
Cu –Al (14·3 at.%), temp. var., and deformation 4=7487
Cu–Al alloy, vacancy formation by quenching 3=20868
Cu alloys, with Al, Si, Zn, cold worked 0=15888
Cu alloys with Cr, Mn, Fe, Co, low temp. 2=4081
Cu, alloys, dilute, at 4-120°K 0=9863
Cu alloys, 4. 2-348°K, deviations from Matthiessen's rule 0=1613
Cu alloys, low temp., temp. var. and thermal, Pippard's theory 4=17362
Cu–Au alloys, with Co, Fe, Mn impurities 1=111254
Cu–Au alloys, disordered, residual, quantum theory 4=4109
Cu–As alloy, effect of plastic deformation and annealing 0=21131
Cu_3Au alloy, heat treatment effect 3=3330
Cu_3Au, quenched and plastically deformed 2=8273
Cu_3Au, shock wave effect on resistivity 4=26508
Cu-base alloys, resistance at 35°C, rel. to neutron irradiation 3=11291
Cu–Co, Cu–Fe, Cu–Mn dilute alloys, resistivity, effect of internal oxidation and heat treatment 0=17996
$CuFeS_2$ 3=1027
$CuFeS_2$, elec. props. 2=18888
$CuFeS_2$, temp. dependence 1=19872
Cu–Ge solid solns., supersaturated, decomposition 1=15159
CuI films 1=20536
CuI films, oxygen-controlled 3=13071
Cu–Mn alloy, effect of thermal ageing 1=1297
Cu–Mn, resistivity 1=14729
$Cu_xMn_{3-x}O_4$, rel. to composition and temp. 4=15555

Conductivity, electrical—contd
Cu–Ni alloys, disordered, residual, quantum theory 4=4109
Cu–Ni alloys, (80, 60, 40% Cu) sintered 1=10028
Cu–Ni and n prod. vacancy de-segregation on heat treatment 4=22645
Cu–Ni alloys, resistivity maxima at low-temp. Curie points 0=11662
Cu–Ni wires, resistivity, rel. to neutron-irradiation 3=10719
CuO, high-pressure effects 1=1024
Cu_2O, rel. to adsorption of air and water 4=1770
Cu_2O, effect of elec. field at surface 2=18859, 23592
Cu_2O, high-pressure effects 1=1024
Cu_2O, inversion layer at surface' 2=23380
Cu_2O, new acceptor energy level on Ag diffusion 1=19876
Cu_2O, press. depend. 0=1668
Cu_2O rectifiers, surface conductivity 0=13624
Cu_2O, single crystal 1=17727
Cu_2O single crystal, effect of oxygen 1=17726
Cu_2O, single crystal, 500–1100°C, in O_2 1=7646
$(CuO)_x(Mn_2O_3)_{1-x}$ 3=8521
Cu phthalocyanine, rel. to carrier mobilities 4=6994
α-Cu phthalocyanine, surface cond. meas. 4=28422
Cu–Sb alloy, dilute, effect of cold working 0=9934
Cu_2Sb, 2.5°-300°K meas. 4=15520
Cu–Ti alloy 4=1556
Cu–transition metal alloys, model 2=16675
Cu–Zn, α-phase, 4.2°-300°K 3=20267
CuZnβ, near transition temp. 2=15059
Cu–Zn alloy, effect of plastic deformation and annealing 0=21131
Cu–Zn alloy, identification of lattice imperfections 0=9900
Cu–Zn ferrites, temp. depend. 0=564
Cu–Zn–Sb alloys 3=23466
D plasma 1=7038
D_2, electron collision cross-sections in d.c. field 3=23942
D_2, electron diffusion—mobility coeffs. ratio 3=4023
Dy, effect of very high pressures 2=619, 10435
Dy in molten Dy trichloride, irregularity 4=8220
Dy, 1.3-300°K 0=18002
Dy, 1.3-400°K, evidence for mag. transitions 0=6079
Dy, 4·2-350°K 3=25322
$DyCl_3$—$DyCl_2$ 4=8220
Er, effect of very high pressures 2=619, 10435
Er in molten Er trichloride, irregularity 4=8220
Er, rel. to screw-type spin ordering 3=15465
Er single crystals, 4·2–300°K 1=7774
Er, 1.3-300°K 0=18002
Eu, 1.3-300°K, peak at 90°K 0=6080
Er, 4·2-350°K 3=25322
Fe 0=2797
Fe, anisotropic resistivity, effect of hydrostatic high press. 4=22675
Fe, Arnco 0-1000°C 0=13498
Fe, b.c.c. and f.c.c., rel. to pressure 3=13523
Fe, rel. to damage "threshold" and saturation of neutron irrad. 3=8759
Fe, doped, neutron irrad. at 78°K 3=13034
Fe, films, chemisorption depend. 0=4313
Fe films, effect of adsorption of N_2 4=7727
Fe, films, ~ 100A, up to 300°C, and activation energy 3=15538
Fe films, 100-1400 A thickness 2=23241
Fe-group metals, resistance 3=10715
Fe, high pressures 2=8276
Fe, high purity, rel. to temp., 300-1300°K 4=30611
Fe, neutron irrad. 4=28509
Fe, neutron irradiated 0=20864
Fe, 0.38°-4.2°K 2=16679
Fe, 0·38-4·2°K 3=6560
Fe, oxide-coated surfaces in contact 1=1017
Fe, pure and alloyed, expt. analysis 2=2111
Fe, residual resistance when contaminated with iron 1=7511
Fe, resistivity anisotropy 1=14362
Fe sheets, skin effect 3=831
Fe, single crystals, effect of tension (elastoresistance) 2=14491
Fe, rel. to solid, phase transformations 1=17607
Fe, spin-wave scatt. at low temps., meas. 4=1553
Fe strips meas., 0-30 Mc/s 4=7236

Conductivity, electrical—contd
- Fe wire bipolar negative resistance element, expt. demonstration with 20 s. w. g. soft Fe wire 4=30610
- Fe—Al alloys, effect of cold working and heat treatment 1=10137
- Fe—Al, quenched, annealed, rel. to ordering 3=3327
- Fe_3Al alloy, anomalies due to annealing 1=6126
- Fe_3Al, electrical resistivity 1=1018
- Fe_3Al, and equilib. diag. 3=3326
- Fe_3Al, neutron irrad. 2=23233
- Fe_3Al, resistivity, effect of ordering 0=20866
- Fe alloys, donor-acceptor interactions 0=732
- Fe alloys, effect of small admixtures 1=6128
- $FeAs_2$, temp var., and paramagnetism 3=6601
- FeAsS, temp var., and paramagnetism 3=6601
- Fe-base alloys, rel. to Ni and Co content 4=17736
- Fe—C, annealed after irrad., elec. resistivity meas. 4=15735
- Fe—C, neutron irrad. 2=23767
- Fe—C, rel. to reaction of C with point defects 3=10702
- Fe—Co alloys, Co conc. depend. 1=3714
- Fe—Co ternary alloys, residual resistivities 3=3103
- Fe—Co—V alloys, annealing and ordering 4=1992
- Fe—Co—V, effect of heat treatment 4=22676
- Fe—Co(2% Va), variation with temperature due to superstructure 1=14700
- Fe—Cr, during $\alpha \rightleftharpoons \gamma$ transformation 2=23234
- Fe—Cr alloys, quenched from over 800° C 3=5060
- Fe—Cr alloys, short-range order, high-temp. annealing 1=11580
- Fe—Cr alloys, rel. to solid, phase transformations 1=17607
- Fe—Ge alloys, β-phase 4=29118
- Fe—Ge alloys, heat treatment and temp. depend. 4=26010
- Fe—Mn ferrite, electrical resistance 1=2484
- $Fe_xMn_{3-x}O_4$, rel. to temp., anomaly at Curie pt. 4=17491
- Fe—Mo alloys, rel. to temp. 4=17421
- Fe—Ni alloys 0=6081
- Fe—Ni alloys, rel. to Hall const. 4=26011
- Fe—Ni (50-50), and order—disorder transform by n irrad. 4=7496
- Fe(50%)—Ni(50%), ordered state development rel. to neutron irrad. 3=11056
- Fe—Ni, in mag. field at low temp. 3=8489
- Fe—Ni, Ni conc. depend. 4=13184
- Fe—Ni—C, voltage signal at rapid phase change 2=4451
- Fe—Ni—Mn, α-phase, temp. depend. 4=23168
- Fe—Ni—Mn—Ti, α-phase, temp. depend. 4=23168
- Fe—Ni—Mo alloys, rel. to Mo content 4=17737
- Fe—Ni—Ti, α-phase, temp. depend. 4=23168
- Fe oxides, electron transfer model 2=10490
- Fe oxides, rel. to Fe/O ratio 2=10490
- FeO_{1+x}, at high temps. 4=25989
- α-Fe_2O_3, antiferromag., theory 1=3732
- Fe_2O_3, α-phase, effect of impurities 4=1599
- α-Fe_2O_3, natural impure crystals, temp. depend. 1=10036
- Fe_2O_3, α-phase, pure, carrier processes 4=1600
- α-Fe_2O_3 single crystals, natural and synthetic 4=28615
- Fe_3O_4, above transition point, calc. from electron model 2=2129
- FeS, anisotropy 1=12424
- FeS single crystals 0=4484
- FeS_X (x = 1.00-1.14), anomalies 1=14760
- $FeSb_2$, semiconducting 1=3769
- $FeSe_2$, semiconducting 1=3769
- Fe—Si, Si conc. depend. 4=13184
- Fe—Si alloys, up to 1200° K 3=22905
- $FeSn_2$, theory 0=13577
- $FeTe_2$, semiconducting 1=3769
- $FeTe_X$ (x = 0.8, 0.95, 1.10-1.15) 1=12531
- $FeTiO_3$, (ilmenite), single crystals 4=26122
- Fe—V alloys, room and liq. N. temp. 4=1564
- α-Fe—W, W-conc. depend. 1=4060
- Ga, and Debye temp. anisotropy 4=20217
- Ga films 1=17610
- Ga films 3=17875
- Ga, ideal resistivity, rel. to temp., and departures from Matthiessen's rule 4=17475
- Ga, liquid, electron mean free path, by positron annihil. 4=199
- Ga, liq., electron transport props. 3=1710
- Ga, liq., up to 160°C at const. volume 3=23902
- Ga liq., rel. to pseudopot. theory 4=21152

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- Ga, liquid, and viscosity data, structure changes 0=12419
- Ga, low temps., impurity effects 4=17474
- Ga, molten, meas. 3=9475
- Ga, phase transformation 0=9930
- Ga, resistance rel. to current, 1.2° to 1.4°K 3=17817
- Ga, very pure, temp. depend. at low temps., electron m.f.p. 3=22892
- GaAs, rel. to elec. fld, 4°-30°K 3=10813
- GaAs films 1=20668
- GaAs, in impurity bands at low temp. 1=17730
- GaAs, at and above m.p. 2=21918
- GaAs, at and above m. pt. 3=5448
- GaAs, n-type, rel. to irrad. and annealing 2=23387
- GaAs, n-type, resistivity, rel. to diffused Cu 2=23384
- GaAs, n and p-type, surface meas. 4=12893
- GaAs, p-type, with Cu, Zn, Cd impurities 2° to 300°K 2=23388
- GaAs thin films, Ohm's law temp. validity determ. 4=30621
- GaAs—Ga_2Se_3 solid solutions 1=19877
- GaAs—Ga_2Se_3 system 0=11712
- GaAs—InAs, as function of temperature 1=10026
- $Ga(As_{1-x}P_x)$, n-type, pressure effect up to 15 000 atm. 4=17487
- GaI—Ga_2I_4—Ga_2I_6 molten system 3=18827
- GaP, 78°-100°K 3=17879
- GaP, 100-400°K 0=11713
- GaP, p-type, mobility and scatt. mechanism 2=12528
- GaSb films, undoped, sputtered on glass 3=3357
- GaSb, n-type 3=10819
- GaSb, p-type 2=18703
- GaSb—InSb alloys, rel. to composition 2=23383
- (90%)Ga_2Se_3—(10%)GaSe, amomalies 1=10072
- Ga_2Te_3 1=17744
- Ga_2Te_3 (59.5-60.0 at.%) Te 3=10815
- Gd, due to ionic moment disorder, theory 2=3980
- Gd in molten Gd trichloride, irregularity 4=8220
- Gd, 1.3-300°K 0=18002
- Gd, 1.5-20.3°K 4=17473
- Gd, 4°-375°K meas., rel. to mag. transitions 4=10027
- Gd, 4.2° -380° K meas. 4=4358
- Gd, 90-370°K 3=8497
- Gd, spin-wave scatt. at low temps., meas. 4=1553
- Gd, temp. dependence 1=17601
- GdB_6 2=3998
- Gd—Dy alloys, and magnetic spiral struct. between Curie and Neel points 4=13110
- Gd—Er, effect of localized mag. moments 3=13033
- Gd hydride, rel. to composition 4=20328
- Gd—Lu, effect of localized mag. moments 3=13033
- Ge 4=12895
- Ge, amorphous layers, 20 to 600°C 0=2882
- Ge, anisotropy in strong elec. fields 0=6111
- Ge, As-doped, heavily, I—V characteristics 2=23561
- Ge, Au-doped, surface cond., rel. to fracture, liq. N_2 temp. 4=10052
- Ge, bombarded by fast neutrons, meas. 3=10898
- Ge, changes under tension and illumination 4=4150
- Ge cleaved surfaces 1=1047
- Ge coarse-grained layers 1=14435
- Ge, cross-sectional variations, rel. to crystal growth 2=8342
- Ge, Cu-doped, impurity conduction 3=10789
- Ge, dendritic strips, effect of growth conditions 3=18282
- Ge dendrite strips, structure 3=18281
- Ge, diffused layers, relation with surface concn. 1=7636
- Ge, effect of electron bombardment 0=11687
- Ge, effect of electron bombard. and annealing 2=10463
- Ge, effective charge and mobility of Tl ions 3=25345
- Ge, due to electron bombard., mechanism 2=14531
- Ge, electron—hole mobility at 9 kMc/s 2=23347
- Ge rel. to electron-irrad. 3=22859
- Ge epitaxial films, meas. method 3=2889
- Ge, epitaxial films, p-type 4=4152
- Ge, extrinsic and intrinsic cond. ranges 2=18678
- Ge, on fast neutron bombard. 4=10012
- Ge, field dependence 1=17681
- Ge, films 0=20897
- Ge films, acceptor conc. reduction by cleanliness improvement 4=6965
- Ge films, effect of neutron irrad. 4=15538
- Ge films, effect of small amounts of O_2 3=13062

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- Ge films, effects of electronic interact. with CO 3=25346
- Ge films, rel. to evaporation parameters 3=20926
- Ge films, rel. to substrate temp. during deposition, thickness and temp. 4=20806
- Ge, 14.2 MeV neutron irrad. 2=6452
- Ge, grain boundaries in bicrystals, analysis 3=8508
- Ge, heavily doped n-type, resistivity 1=14445
- Ge, hot, carrier injection, high field mobility 4=4158
- Ge, impurity conduction of surfaces at low temps. 1=1048
- Ge layer, rel. to thickness 2=21140
- Ge, rel. to K-ion bombardment 3=17851
- Ge, liq., charge carriers formulae 3=14167
- Ge, at liq. He temp. 1=17701
- Ge at liquid-helium temperatures, thermal effects 1=14432
- Ge, low temp. 0=6108
- Ge, low-temp., effect of doping 2=2918
- n-Ge, magnetoresistance in pulsed fields 1=10041
- Ge—methylmethacrylate interface 3=20300
- Ge—mica capacitors, surface cond. in elec. field 1=12439
- Ge, rel. to microhardness 2=16971, 19023
- Ge, microwave, of doped spheres 0=5243
- Ge, molten, meas. 3=9475
- Ge monocrystals, irradiated with γ-rays, effect of annealing 1=7609
- Ge, monocrystals, lacquer-coated 0=15929
- Ge, n irrad., 14 MeV, n type, and crystal imperfection distrib. 4=6822
- Ge, n-type, anisotropy in high fields 3=15575
- Ge n-type bicrystal, cond. at grain boundary 3=8506
- Ge, n-type, 4°-25°K, general analysis 3=2894
- Ge, n-type, as function of surface pot. 2=23342
- Ge, n-type, high-freq., rel. to elec. field intensity 2=23314
- Ge, n-type, hot electron effects, 9.392 Gc/s 4=22712
- Ge, n-type, rel. to neutron-irradiation 2=6453
- Ge, n-type, pres. and freq. depend. 3=20306
- Ge, n-type, Sb-doped 1=17700
- Ge, n-type, σ rel. to neutron-irrad. 2=23326
- Ge, n-type, along tilt and twist grain boundaries 3=854
- Ge, n-type, transitory props. after neutron pulse 0=13597
- Ge, n-type, variation in strong pulsating mag. flds. 3=2887
- Ge, negative resist. at low temps., rel. to electron scatt. 2=8341
- Ge, rel. to neutron-irrad. 2=23325
- Ge, neutron irrad., rel. to carrier conc. 4=12898
- Ge, 1.7-290°K, n-type, strongly doped with Sb 3=20302
- Ge, oxygen doped 2=2146
- Ge, p-type, effect of deformation 0=13596
- Ge, p-type, in high fields, at low temp. 2=23313
- Ge, p-type, nearly pure, rel. to elec. field 2=23311
- Ge, p-type, 0.2°-4°K 2=10464
- Ge, phosphorous doped 2=2113, 23338
- Ge, by photoconductive investigation 1=11325
- Ge, by photoconductive investigation 1=17801
- Ge, photovoltiac evaluation of homogeneity 1=14514
- Ge, polarization conductivity at 1.2°-4.2°K in p-type 4=1607
- Ge, polycrystalline films, deviations from Ohm's law 0=15921
- Ge powder films 1=14452
- Ge, quasi-intrinsic, interelectron scatt. 3=20312
- Ge, surface 1=14454
- Ge, surface, clean and oxidized, meas. 4=6969
- Ge, surface, cleaned, anomalous, at low-temp. 2=23333
- Ge, surface cond. after exposure to oxygen 3=4174
- Ge, surface cond., effect of etchant impurities 0=9959
- Ge, surface conductivity, influence of humidity 1=14431
- Ge, surface, homogeneity from photovoltaic effect 2=12510
- Ge, surface, rel. to humidity 2=23331
- Ge, surface, after ion bombard. and annealing 2=3894
- Ge, surface, slow effect of corona discharge in air 2=2152
- Ge, rel. to Ta diffusion and solubility 0=1599
- Ge, thin granular films, flicker effect 2=8280
- Ge, transmutation-doped, impurity 2=23320
- Ge, very thin films 2=14496
- Ge, warm and hot electrons, anisotropy angle 4=10068
- Ge, Zn-doped, 5°-250°K 4=6957
- Ge, Zn doped, negative resistance 2=14535
- Ge—NaOH soln., surface cond., rel. to potential distrib. 2=10474
- Ge oxide films, resistivity 4=28613

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- Ge oxides in Ge 2=23352
- GeO_2 films, on Ge, anodically grown 0=12087
- Ge:Sb, 4-7°K, effect of tension and compression 0=20903
- Ge—Si alloy, isotropic piezoresistance 2=14540
- Ge—Si alloys, 20-900°C 0=18022
- H, atomic, up to 10^5°K 2=11426
- H plasma 1=18843
- H, plasma, highly ionized 0=12586
- H, solid, under high pressure 4=10019
- H_2, anisotropic electron distrib., theory 3=12072
- H_2, electron collision cross-sections in d.c. field 3=23942
- H_2, electron diffusion—mobility coeffs. ratio 3=4023
- H_2, electron drift velocities from mol. excitation 4=11252
- H_2, ratio of drift speed to diffusion coefft. 4=11254
- H_2—Ar, transport coeffts. and cross-sections calc. 4=11257
- HCl, aq. soln., activation energy rel. to pressure 4=2706
- H_2O, pure 4=24238
- αH-Pd 2=6410
- He, cylindrical shock wave, current density meas. 4=18828
- He, electron diffusion—mobility coeffs. ratio 3=4023
- He, electron drift velocity meas. at high E/P 4=11550
- He, gas, partly ionized 3=11840
- He plasma, calc. 4=531
- He^3 and He^4 I liquids; electronic and ionic mobility 3=317
- He^4, liquid, 1.2-2.4°K 0=12550
- Hf borides, carbides and nitrides 1=3707
- HfO_2, meas. rel. to O_2 pressure 3=12957
- Hg films, after quench-condensing 2=23242
- Hg films, rel. to thickness 2=18636
- Hg, liquid, electron diffusion, electric currents 0=19150
- Hg, molten, meas. 3=9475
- Hg, up to 160°C at const. volume 3=23902
- Hg, vapour at high temps. and low pressures 2=2761
- $HgIn_2S_4$ 1=10066
- HgS, α-phase, effect of impurities 4=7073
- α-HgS, thermally stimulated 2=23405
- α-HgS, thermally stimulated 3=6600
- HgSe, defect mechanism 2=16728
- HgSe, rel. to high-pressure phase transition 3=3253
- HgSe, 90° to 500°K 1=17752
- HgSe—HgTe system 1=17813
- HgTe, doped and undoped, 77°-400°K 4=10063
- Hg telluride soldered contacts with In, Sn 0=8462
- HgTe—CdTe, rel. to composition 3=17890
- Hg Te—Cd Te solid solutions, rel. to vacancy study 4=28998
- Hg[Cd]Te—$In_2[Ga_2]Te_3$, solid solutions 3=11301
- Ho in molten Ho trichloride, irregularity 4=8220
- Ho, 1.3-300°K 0=18002
- Ho, resistivity meas. 4.2° to 300°K 2=21098
- I, resistivity var. with temp. and press. 3=8524
- I, temp. coeff. at high pressure 2=21156
- I_2, transient space-charge-limited currents along various crystallographic directions 4=25883
- In, evap. mirror coatings 3=22676
- In films, rel. to adsorbed O 3=16872
- In films, effect of rate of deposition 2=14498
- In films, effect of residual gases 2=1339
- In, films, rel. to electrostatic charging 3=15545
- In films, after quench-condensing 2=23242
- In films, residual resistivity in supercond. state 1=10641
- In films, rel. to size 3=15548
- In films and wires 3=15448
- In, 4.2°-1.65°K, rel. to sample size 3=2851
- In liq. 2=5019
- In, liquid, electron mean free path, by positron annihil. 4=199
- In, at melting pt., fusion curve det. to 10^5 atm 0=9840
- In, —190 to 120°C range 2=23088
- In, resistance, 10° to 14°K 3=2852
- In wires, 4.2°K, polycryst., size effect 3=20273
- InAs, effects of high pressure 3=17886
- InAs, at low temps. 2=23398
- InAs, at low temps. 3=6596
- InAs, at and above m.p. 2=21918
- InAs, at and above m. pt. 3=5448
- InAs, n-type, resist. in strong mag. fields 200-360°K 2=4038
- InAs, n-type, resistance in strong magnetic fields, 20°-360°K 3=4925
- InAs—CdTe alloys, n-type, up to 400°C 4=22717

Conductivity, electrical—contd

- In arsenide phosphide electron mobility 0=11716
- In arseno-selenides, Hall coeff. 2=10489
- InAs – In_2Se_3 system 4=1611
- In_2Bi, molten, 100° to 350°C 4=8167
- In_2O_3 2=21153
- In_2S_3 meas. 4=20374
- In_2S_3, value and effect of irradiation 0=2898
- InSb, diffusion coefft. rel. to mobility 3=13074
- InSb, effect of pressure up to 7 x 10^4 atm 1=6160
- InSb, effects of high pressure 3=17886
- InSb, mag. field and temp. depend. 0=18044
- InSb, after n, γ irrad. at 78°K, recovery on heating 4=6976
- InSb films, rel. to annealing 4=20808
- InSb films, undoped, sputtered on glass 3=3357
- InSb, high-field 4=4160
- InSb, metallic form 4=29114
- InSb, n-type, negative resist., rel. to impurity impact ionization 4=10058
- InSb, n-type, optical mode and ionized impurity scatt. 4=1700
- InSb, p-type, rel. to valence band and hole scatt. 3=22947
- InSb, surface conductance meas. for p-type crystal in heptane and heptane—ethanol mixtures 4=28564
- InSb, surface conductance, photocontrolled 4=20371
- InSb, ultrapure, rel. to elec. field 2=23390
- InSb, at 2-78°K 0=15958
- InSb, at 77° and 20°K in high elec. fields 4=30538
- InSb, 77-450°K, 25-25kOe 3=25367
- InSb, 80°-500°K, in n- and p-type 4=26048
- InSb, 125 to 500°K 1=1074
- InSb. GaSb elec. props., temp. depend. 0=15959
- InSb—Sb eutectic alloys 3=23401
- InSe, 300°-600°K 3=13073
- In_2Te_3 1=17744
- In_2Te_3, with defect struct. 2=23399
- In_2Te_3, effect of pressure 0=13615
- In_2Te_3—InAs 3=1345
- In_3Te_5, increase associated with phase transition at 463°C 4=29011
- K, effect of capillary constraints 3=7410
- K, effect of pressure at low temps. 3=828
- K, extruded, 4.2-195°K 0=1850
- K films, on KCl, annealing effect 4=4122
- K films, rel. to substrate structure 3=18389 ; 3=18391
- K films, rel. to thickness 2=18636
- K, pressure depend. over 500 kbar 4=1559
- K, press. effect 4=20332
- K vapour plasma, fully-ionized, meas. 4=11587
- K, rel. to wavelength, in terms of band transitions 4=12666
- KBr, rel. to anion impurities 3=17944
- KBr, rel. to Pb impurity content 4=6895
- KBr soln. in liq. K., rel. to conc. 2=21921
- KBr, temp. and voltage depend., space charge effect 1=14392
- KBr, uncoloured, schubweg determ. 2=12395
- KCl, rel. to anion impurities 3=17944
- KCl, aq. soln., activation energy rel. to pressure 4=2706
- KCl, rel. to colour centres 0=15880
- KCl, containing sulphate ions, ionic cond. 2=8297
- KCl crystals, ionic cond., a.c. polarization effects 2=2112
- KCl crystals, rel. to plastic deformation 1=19763
- KCl, effect of pressure on ionic conductivity 1=11271
- KCl, rel. to F-centres and temp. 2=12500
- KCl, γ-irradiated 2=12572
- KCl, ionic cond. 2=3981
- KCl, ionic, rel. to defect props. and energy 2=8300
- KCl, ionic, effect of OH^- ions 3=18005
- KCl, ionic, 25-250°C, effect of plastic deformation 1=8929
- KCl, KBr phosphors, correl. with thermoluminescence 2=23624
- KCl, with large F-centre conc. 1=994
- KCl, Sr doped, temp. var., and association 4=20407
- KCl, Sr-doped, X-irrad. 4=25991
- KCl, rel. to vacancies and impurities 1=12373
- KCl, X-ray irrad. 0=11658
- KCl-LiCl fused salt mixtures, conductivity, d. c. meas. 4=24232
- $K_2Cr_2O_7$, solid and molten, rel. to melting study 0=13466
- KD_2PO_4, rel. to random motion of deuterons 2=12365
- KF soln. in liq. K., rel. to conc. 2=21921

Conductivity, electrical—contd

- K ferricyanide monocrystals 2=3999
- K halides, effect of F centres 4=20314
- K halides, zone refined, ionic conductivity 0=7916
- KI coloured with I_2, ionic conductivity 4=28618
- KI, effect of colour centres 1=14389
- KI, increase on plastic deformation (Gyulai—Hartly effect) 1=14390
- KI soln. in liquid K, spec. cond. decrease 1=9406
- $KLiSO_4$, d.c. resistivity near transition point 2=16770
- KNO_2, solid and molten, rel. to melting study 0=13466
- KNO_3, resistivity 2=12498
- $KNbO_3$ 3=16033
- K_2NbO_3F, temp. depend. 3=3306
- KOH, aq. soln., activation energy rel. to pressure 4=2706
- KSCN, room temp. to melting point 3=22983
- K—Sb films, rel. to composition 3=8495
- Kr plasma in anode-glow mode, neg. resistance 3=5635
- La in molten La tribromide, increase with metal conc. 4=8220
- La, 1.3-300°K 1=5003
- La soln. in molten LaI_3 3=21404
- $LaCoO_3$, anomalous var. with temp. 4=28616
- La hexaboride, temp. depend. 1=5005
- La_2S_3, 20-1000°C 4=4161
- Li, effect of isotopic composition 2=10434
- Li, effect of pressure at low temps. 3=828
- Li, Li-Mg, martensitic transformation effect 2=6411
- Li^6 and natural Li, resistivity 1=17608
- Li, press. effect 4=20332
- Li, pressure depend. over 500 kbar 4=1559
- $LiClO_3$, molten, effect of impurities 2=15148
- LiF, effect of neutron irradiation 1=10020
- LiF, effect of neutron irradiation 2=615
- LiF, ionic conductivity in grain boundaries 4=26101
- LiF, rel. to irradiation and temp. 1=16734
- LiF, with Mg^{2+} impurity, irradiation effects 2=12481
- LiF, Mn-doped, mechanism meas. by e. s. r. 4=30646
- LiF, rel. to neutron-irrad. 3=22981
- LiF, neutron-irrad., effect of irradiation temp. 3=2946
- LiF single crystals, 20-560°C, hole mechanism 1=14391
- $LiNO_3$-$NaNO_3$-KNO_3 fused eutectic d. c. meas. 4=24233
- $Li_2SO_4.H_2O$, anisotropy, 15-80°C 1=14396
- Lu, 1. 3-300°K 0=18002
- Lu alloys, scatt. of conduction electrons by localized moments 2=23239
- Mg, effect of temp. and pressure 3=25323
- Mg, low-temp. thermal cycling 2=23776
- Mg, low temp. thermal cycling 3=3233
- Mg, resistivity rel. to vacancies in quenched and cold worked specimen 3=25269
- Mg alloys, dilute, Matthiessen rule deviations, rel. to phonon spectrum 4=28531
- $MgCl_2$, MgI_2, conc. solns. 2=11385
- Mg_3Cd, ordering kinetics 4=1995
- Mg—Gd alloys, dilute, meas. down to 1°K 4=10029
- $Mg_2Ge_xSi_{1-x}$, 250-600°K meas. 3=13142
- $MgMn_2O_4$, cation migration process meas. 4=26052
- $Mg_xMn_{3-x}O_4$, rel. to composition and temp. 4=15555
- Mg—Nd alloys, dilute, meas. down to 1°K 4=10029
- Mg—Nd alloys, effect of Nd in resistivity 3=829
- Mg—Nd alloys, resistivity anomaly 2=14489
- MgO 0=1283-4
- MgO, bombardment effects 0=7944
- MgO, by electron bomb. at 1·3 MeV, 100—600°K 1=7627
- MgO, rel. to γ-irrad. 4=28617
- MgO, nature at high temp. 2=18643, 21107
- MgO, pure and doped 3=15611
- MgO, rel. to secondary electron emission 3=14637
- MgO, single crystals 0=2899
- MgO single crystals, electronic and ionic 2=8298
- Mg_3Sb_2 thin films 2=6460
- Mg_2Si, n- and p-type 2=23404
- Mg_2Si, resistivity of cubic and hexagonal phases 4=30804
- Mg_2Si—Mg_2Sn solid solns. 2=8453, 14593
- Mg titanate, effect of reactor irrad. 2=14507, 18646
- Mn, high pressures 2=8276
- Mn alloys, mag. Brillouin zone effects 3=20554
- MnB, rel. to electronic structure 3=6488
- $MnCl_2$, conc. solns. 2=11385
- Mn—Cr, meas. 4=29146

Conductivity, electrical—contd
- $Mn_{2-x}Cr_xSb$, changes rel. to mag. transitions 4=1617
- Mn—Cu alloys, effect of short-range spin correl. 4=1554
- $Mn_{1.16}Fe_{1.84}O_4$, heat treatment depend. 3=22949
- $Mn_xFe_{3-x}O_4$, low temps 4=1548
- Mn ferrite, near Curie pt., anomaly 4=17492
- Mn ferrite monocrystals 3=20334
- Mn ferrite, phase transform., −75°C 1=14381
- Mn ferrites, non-stoichiometric, −50° to +300°C 0=11656
- Mn ferrites, temp. depend. 0=11665
- Mn ferrites, Verwey hopping mechanism 4=12905
- MnHg 1=20166
- MnO 1=19839
- MnO_2 1=19839
- MnO_2, in catalysis of oxidation of CO 1=5111
- β-MnO_2, frequency variation 0=4364
- MnO_2 (pyrolusite), anomaly at Curie temp. 1=7690
- β-MnO_2, pyrolytic 4=26102
- MnO_2, temp., freq. and voltage depend. 0=18092-3
- Mn_3O_4 1=19839
- Mn—Si alloys 3=871
- $MnSn_2$, increase at 73°K, mag. transition 1=11460
- $MnSn_2$, theory 0=13577
- MnTe, Cr-doped, resistivity 2=18700
- $MnTe_2$, semiconducting 1=3769
- Mn—Ti, rel. to phase transformation 1=10270
- Mn_3ZnC, resistivity 1=19829
- Mn-Zn ferrites 2=8454
- MnZn ferrites 1=17635
- Mo, 4.2°-300°K 4=22677
- Mo, 900°—2200°C 1=9988
- Mo, rel. to radiation damage recovery 3=8470
- Mo, reactor-grade, 4-120°K 0=11588
- Mo, residual, rel. to neutron damage recovery 2=10380
- Mo borides, carbides and nitrides 1=3707
- Mo—Fe, low temp. behaviour 3=13035
- Mo—Nb alloy, effect of 1% Fe, meas. 4=28530
- Mo—Nb—Fe(1%) 4=12859
- Mo oxides 0=18345
- Mo—Re alloy, effects of 1% Fe, meas. 4=28530
- Mo—Re—Fe(1%) 4=12859
- $MoSe_2$—WSe_2 polycryst. system, resistivity 4=22720
- $MoTe_2$—WTe_2 polycryst. system, resistivity 4=22720
- Mo-Ti alloy, b.c.c., anomalous variations 2=2115
- Mo-U alloys 0=4320
- N and Ar plasmas, specific radiation calc. and meas. 4=29934
- N_2, boiling, in reactor, irradiated 2=6051
- N_2, electron diffusion—mobility coeffs. ratio 3=4023
- N_2, electron drift velocities 3=12077
- N_2, electron drift velocity, avalanche meas. 4=11253
- N_2, momentum transfer and inelastic collision cross-sections, electron transport coeffs. 4=27228
- N_2, ratio of drift speed to diffusion coefft. 4=11254
- NH_4Cl, solid, pure and doped, rel. to other NH_4 salts 4=30603
- NH_4ClO_4, temp. and ambient atmosphere effects 4=4200
- $NH_4H_2PO_4$, rel. to temp. 4=28609
- NH_4NO_3, d.c., thermal transformations data 2=6762
- Na, effect of capillary constraints 3=7410
- Na, effect of pressure at low temps. 3=828
- Na, extruded, 4.2-195°K 0=1850
- Na films, rel. to thickness and temp. 3=15550
- Na, liquid, electron mean free path, by positron annihil. 4=199
- Na, molten, meas. 3=9475
- Na, press. effect 4=20332
- Na, pressure depend. over 500 kbar 4=1559
- Na, surface, in mag. field, and cyclotron reson. with helicon waves 4=22554
- Na, due to twinning in (111) plane, theory 4=22686
- Na, two low-temp. phases, 15-50°K 0=7914
- NaAl silicate glasses, Al/Si depend. 0=11659
- Na-alkali alloys, liq., atomic size effect 2=11386
- $Na_2[B_4O_5(OH)_4].8H_2O$, proton cond. 3=2904
- NaBr, rel. to colour centres 0=15880
- $NaBrO_3$, temp. var., and positive ion vacancies 4=7034
- NaCl, rel. to anion impurities 3=17944
- NaCl during creep at high temp. 1=10034
- NaCl crystals, doped with divalent cations, ionic cond. 4=17467
- NaCl crystals, strained 2=8302

Conductivity, electrical—contd
- NaCl, doped with divalent cations, ionic cond. 2=12501
- NaCl, effect of air and water vapour 4=1653
- NaCl, effect of pressure on ionic conductivity 1=11271
- NaCl, effect of sudden pressure 0=17993
- NaCl, effect of X-irradiation 0=1622
- NaCl, ionic conductivity, time dependence 3=10872
- NaCl, ionic, γ-irradiation effects 0=6067
- NaCl, KCl, rel. to defect formation, motion 2=3990
- NaCl and KCl single crystal thin layers 2=6428, 8304
- NaCl, new values, deformed crystals 3=890
- NaCl, rel. to stationary dislocations 2=12438
- NaCl, rel. to structure 0=16366
- NaCl, surface, rel. to water vapour pressure 3=22985
- NaCl: Pb, effect of 600°C annealing 0=20990
- Na—DNA, highly polymerized, pressed pellets 4=12840
- NaI-C_2H_5OH, near critical temp., dissoc. const. 2=17481
- Na, liquid alloys, resistivity 0=16693
- $NaNO_2$, resistivity 2=12498
- $NaNO_2$ single crystals 3=23002
- $NaNO_3$, single crystal, γ-irrad. effect 4=22777
- $NaNO_2$, solid and molten, rel. to melting study 0=13466
- $NaNO_3$, temp. var. 4=4204
- Na_2O—K_2O—GeO_2 glasses, rel. to comp. 4=10094
- Na_2O-SiO_2 glasses, effect of BeO, MgO, CaO, SrO, BaO, ZnO, PbO 0=15882
- NaPb silicate glasses containing Fe_2O_3 2=18648
- Nb, 0°-1000° C 4=25869
- Nb, and supercond. upper crit. field 4=18590
- Nb-base binary alloys, rel. to conc. and temp. 4=17813
- Nb borides, carbides and nitrides 1=3707
- Nb—Fe, low temp. behaviour 3=13035
- Nb—N crystals, with 0.9-1.3 at. % N 4=10032
- α-Nb_2O_5 1=6163
- α-Nb_2O_5, 900° to 1400°C 3=8527
- α-Nb_2O_5, nonstoichiometric 3=6602
- Nb_2O_5, rel. to O_2 pressure at 600°-1200°C 3=2923
- α-Nb_2O_5, reduced, nonstoichiometric 2=18709
- Nb_2O_5, α-phase, in vacuum reduction technique 2=10493
- Nb_3Sn, temp. var. anomalies 4=30624
- Nb-U alloys 0=4320
- Nd in molten Nd tribromide 4=8220
- Nd, 1.3-300°K 1=5003
- Nd soln. in molten NdI_3 3=21404
- $NdBr_3$—$NdBr_2$ 4=8220
- $NdCl_3$—$SrCl_2$, electron exchange between adjacent oxidation states 4=8220
- NdI_3—SrI_2, electron exchange between adjacent oxidation states 4=8220
- Ni, changes in mag. field, rel. to domain structure 4=26317
- Ni, effect of cold working and annealing 4=13431
- Ni, rel. to density of electronic states 3=6488
- Ni, films 0=13813
- Ni films 2=6415
- Ni, films, chemisorption depend. 0=4313
- Ni films, Curie temp. determ. 2=21289
- Ni films, Curie temp. from ferromag. anomaly 4=26320
- Ni films, effect of deformation 2=14494
- Ni, films, ~ 100A, up to 300°C, and activation energy 3=15538
- Ni films, thin, rel. to thickness 3=17823
- Ni films at 300°K, resistivity 2=3985
- Ni, films, at 300°K, resistivity 3=4905
- Ni, 4°-300°K, rel. to cathodically appl. H 4=6929
- Ni, rel. to H_2 diffusion processes 2=21067
- Ni, and hardness, changes on coldworking 3=13373
- Ni layer, separated from Al, tunnelling 3=6489
- Ni, mobility of Sb^{124} in d.c. 3=15511
- Ni, neutron effects, and phase transform. 4=23282
- Ni, pure, in mag. field at low temp. 3=8489
- Ni, resistivity recovery, cold-worked and electron-irradiated 0=15883
- Ni, spin-wave scatt. at low temps., meas. 4=1553
- Ni, temp. dependence 1=17601
- Ni thin films, determination of Curie point 1=2477
- Ni thin films, resist., 2° to 300°K 3=832
- Ni thin layers, rel. to ferromag. Curie pt. 3=1077
- Ni wire, effect of N_2 gas pressure 2=10433
- Ni wires, hydrogen supersaturated 2=23236
- Ni alloys, with Mn, Cr, Al, Mo and Fe, neutron irrad. 2=23233
- Ni—B system, 300-550°C, and struct. 4=15742

Conductivity, electrical—contd
$NiCl_2$ film on Ni, diode meas. 2=23913
Ni−Cr (21.4 wt%), neutron effect, and K phase ferm. 4=23282
Ni−Cr alloy, short-range ordering, room temp. -600° C 4=1998
Ni-Cr with Ti, plastic deform., temp. effects 2=18634
$Ni_{0.2}Cu_{0.8}Fe_{1.9}Mn_{0.02}O_4$, d.c. resistivity 4=26055
Ni_3Fe−(3%)Mo, rel. to K-state formation, rel. to excess vacancies 3=13531
Ni ferrite, change on mag., anisotropy 3=17927
Ni ferrite, effect of Mn content, meas. 4=6982
Ni ferrites in mag. field 0=11664
$Ni^{2+}_{0.75}Fe^{2+}_{0.25}Fe^{3+}_2O_4$, 170-273°K 4=26338
Ni ferrite, oxygen deficient 0=7945
Ni ferrite, single crystals 3=3270
$NiFe_2O_4$ ferrite, rel. to temp. and elec. field 2=14506
$Ni_{1-x}Fe_{2-x}O_4$, rel. to temp. 2=10445
NiH, 78-273°K 4=17466
Ni−Mn alloy, effect of plastic deform. 3=5133
Ni_3Mn, disordered alloy, temp. dependence 0=17890
Ni_3Mn, and ordering kinetics 3=3329
Ni−Mo alloys, variation during tempering, K-state function obs. 4=23283
Ni−Nb alloys, Ni-rich, liq. He to 1000°K 1=3711
NiO 1=14474
NiO 1=17755
NiO, antiferromag., theory 1=3732
NiO, high-pressure effects 1=1024
NiO, p-conducting, effect of added oxides 2=4039
NiO, p-type 3=20338
NiO powder, pure and Cr^{3+} doped, freq. depend. 4=30625
Ni−P films, rel. to P conc. 2=14497
Ni−Pd alloy, effect of hydrogenation 3=20269
Ni−Pd alloys, 4-300°K 0=20869
Ni−S 3=25734
Ni−Se 3=25734
Ni−Zn ferrites 3=20336
NiZn ferrites, 50-350° C 3=20618
Ni−Zn ferrites, rel. to porosity 3=4939
Ni−Zn ferrites, pressure depend. 3=4940
Ni−Zn ferrites, temp. depend. 0=564, 18096
Np, resistivity at 0.75°K 0=1084
Np, temp. var. down to liquid He temps., spin-disorder effects 4=6918
Np, 300-900°K resistivity meas. 0=11657
O_2, weakly ionized by X-rays 3=3839
P, black, crystalline 3=17891
P−Ni films 3=10725
Pb, rel. to data on cond. electrons 3=22677
Pb films, rel. to adsorbed O 3=16872
Pb films, rel. to Hall constant 2=6470
Pb films (−150° to +200°C) 1=14368
Pb films, after quench-condensing 2=23242
Pb films, semicond. props. and temp. coeff. 2=6469
Pb. films, temp. coeff. 2=8281
Pb films, rel. to thickness 2=18636
Pb films during vacuum deposition 3=25327
Pb, 4.2°-1.65°K, rel. to sample size 3=2851
Pb, resistance, 10° to 14°K 3=2852
Pb, scattering cross-sections and charges of impurity ions 3=17813
Pb, and supercond. crit. fields var. 4=18579
Pb base cast alloys, rel. to composition 3=20262
$PbCl_2$, pure and doped with KCl and $LaCl_3$ 3=10645
$PbCl_2$, TlCl- or $BiCl_3$-doped, electrolytic 3=17926
Pb ferrite, anisotropy and mechanism 4=6953
PbI_2, ionic, rel. to photodecomposition 3=2921
Pb metaniobate, control by doping 2=16685
$Pb_{1.5}Nb_2O_{6.5}$ 4=26120
PbO, effect of illumination and elec. fields 1=12462
PbO films, treated with S, Se, Te, i.r. region 1=3770
PbO layers 2=2192, 8438
PbO, rel. to surface sorption 2=4065, 8439
Pb(Zr, Ti)O_3, with La, Nd, Ta, Nb additions 0=1702
PbS, effect of Cu doping 3=15593
PbS, effect of pressure 2=23257
PbS, elec. field effect 2=18750, 23467
PbS, ion beam effects 4=4162
PbS layers, dark cond., 10 Gc/s 0=18050
PbS layers, mono- and polycryst. 4=26051
PbS layers, rel. to temp. at 10^{10} c/s 1=11269
PbS layers, rel. to temp., at 10^{10} c/s 1=12422

Conductivity, electrical—contd
PbS, piezoresistance effect anisotropy 2=23403
PbS, piezoresistance effect anisotropy 3=6599
PbSe, Pb- and Se-saturated 2=2168
PbS, pressure depend., up to 9000 kg cm^{-2} 3=22948
PbSe films, temp. depend. 1=8951
PbSe, rel. to impurities, 90° to 430°K 2=23401
PbSe−Bi_2Se_3 system, rel. to composition 3=25742
PbSe−Sb_2Se_3 system, rel. to composition 3=25741
Pb silicate glasses, radiation effects 4=17515
Pb silicate glasses, rel. to "water" content 3=2945
PbTe 2=14592
PbTe, effect of pressure 2=23257
PbTe, electron mobility at liq. He temp., theory 4=4041
PbTe, impurity influence 1=19729
PbTe, impurity influence 2=3857
PbTe, n-type, resistivity, 20°-550° C 4=22813
PbTe, near-intrinsic 2=10491
PbTe, p-type 2=6467
PbTe, p-type, rel. to temp. and press. 1=17735
PbTe, pressure depend., up to 9000 kg cm^{-2} 3=22948
PbTe, resistivity, rel. to carrier conc. and temp. 3=867
PbTe, rel. to temp. 77° to 900° K 1=17750
PbTe−SnTe system alloys 4=23275
$PbTiO_3$, simple crystals 2=21220
$PbTiO_3$−$BaZrO_3$ system 3=13481
$PbTiO_3$−$LaAlO_3$, rel. to phase diagram 3=20767
$PbTiO_3$−$LaFeO_3$ system, temp. and $LaFeO_3$ conc. var. 3=20852
$PbTi_xZr_{1-x}O_3$ ceramics, p-type processes 3=25400
$PbZr_{0.53}Ti_{0.47}O_3$, ionic conduction and pyroelec. effect 1=12423
PbZr, TiO_3 system, transition near 75°C 2=17039
Pd, rel. to H content, hysteresis 3=22896
Pd, H-desorbed 2=14488
Pd−Ag, rel. to temp., composition 2=8277
Pd alloy, effect on transfer of matter in break contact 1=16294
Pd alloys, binary, meas. and theory 3=1126
Pd−Fe, low temp. behaviour 3=13035
Pd−H solutions, maximum at 55° K 1=17418
$Pd_{2.2}S$ and Pd_4S 0=18001
Pd (hydrogenated)−transition metal alloys 2=16675
Pd−U, comp. effect on resist. to 15.5 at.%U 4=29014
Pd−W, Pd−Mo, anomalies 2=21093
Pr, effect of very high pressures, 619, 10435
Pr in molten Pr tribromide 4=8220
Pr, 1.3-300°K 1=5003
Pr soln, in molten PrI_3 3=21404
Pt films, effect of adsorbed Hg 1=17612
Pt films, effect of gas adsorption 1=17611
Pt films, effect of gas adsorption 1=17613
Pt, resistivity rel. to temp., down to liquid He temp. 1=19830
Pt, temp. var., 0-900°K and thermometers < 90°K 3=17819
Pt very thin films, rel. to adsorption of gas 3=15549
Pt wire, recovery after cold working 4=15524
Pt−Mo alloys 2=23880
Pu, α-phase, < 300°K, impurity and self-irrad. effects 2=23237
Pu, anomalous, interband scatt. theory 2=6412
Pu, β, 5-425°K 4=6930
Pu α, low temp. var. anisotropy 4=20335
Pu, α, low temps., high press. 4=15522
α-Pu, with and without Pu^{238}, self-irrad. effects 4=22651
Pu, Pu−Al, decrease due to self-irradiation 4=1537
Pu, resistivity, rel. to α-irrad. 2=12456
Pu, resistivity at 0.75°K 0=1084
Pu, rel. to self-irrad. 2=23238
Pu, self-irradiation effects 4=22680
Pu, temp. var. down to liquid He temps. 4=6918
Pu−Al alloys, δ-phase, rel. to comp. 2=21094
PuC, resistivity from 4.2°-1200°K 4=28416
Pu−Ce alloys, δ-phase, rel. to comp. 2=21094
Pu nitrides and sulphides 3=16473
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Pu−Zn alloys, δ-phase, rel. to comp. 2=21094
Rb films, rel. to substrate structure 3=18390
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Rb, pressure depend. over 500 kbar 4=1559
Rb-B glasses, rel. to composition 1=10033
Rb−B glasses, rel. to composition 1=11270

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RbCl, effect of pressure on ionic conductivity 1=11271
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Rh, temp. coeff. 2=21096
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Rh – Fe alloy, anomalous increase, 1°-50°K 4=15525
Ru, down to 2°K 4=12863
S, effect of short high-pressure pulses 4=2515
S, induced by α-particle bomb. 0=7918
S, rhombic, β ray induced, temp. var. 4=7036
S, rhombic, high-voltage polarization, current flow meas. 4=10098
Sb films, evaporated 3=20701
Sb films, surface, transverse electric field effects 3=15541
Sb films, time var. 4=26003
Sb, liq. 2=5019
Sb, molten, meas. 3=9475
Sb, pressure depend., up to 200 000 kg/cm² 1=5001
Sb, pressure depend., up to 200 000 kg/cm² 1=11251
Sb, temp. depend. 4=1588
Sb, thin films, resistivity and temp. coeff. 1=19826
Sb, thin films, resistivity and temp. coeff. 2=3985
$Sb_xBi_{2-x}Te_{3-y}Se_y$ system 1=19867
SbCs, photocathode, fatigue effects 2=15945
SbI_3, resistivity in solid and liq. forms 2=3997
Sb sulphide, cathodic films 0=11707
Sb_2S_3, elect. conductivity rel. to time 2=6425
Sb_2S_3, molten 4=8197
Sb_2S_3, rel. to S vapour partial pressure 4=2023
Sb_2S_3, rel. to stoichiometry and bonding 4=1590
Sb_2S_3, temp. depend 2=8350
$Sb_2S_3-Sb_2Te_3$ system 3=15585
Sb_2Se_3 2=6461
Sb_2Se_3, temp. depend. 0=620
Sb_2Te_3 films, meas. 3=8514
$Sb_2Te_3-Bi_2Te_3$, composition depend. 0=16001
$Sb_2Te_3-Bi_2Te_3$ solid solution 2=4079, 8449
$Sb_2Te_3-Bi_2Te_3$, solid solution, temp. depend. 0=18079
$Sb_2Te_3:Bi_2Te_3$, temp. variation 1=17810
SbZn–SbCd 0=16002
Sc, 1.38°-358.8°K 3=10722
Sc, temp. depend. 4=26013
Se, amorphous, poly- and monocrystalline 4=26057
Se, Cl doped, reduction by Th, Na, K, As 4=4165
Se, effect addition Tl and TlCl 0=7966
Se, effect of grain size, various dopants 3=22951
Se, effect of impurities 2=626
Se, electric field effect, 77°-293°K 4=6985
Se, grey, shock wave effect 3=830
Se, with halogen impurities 2=8373
Se, ionic cond. of Tl^{3+} 2=18611
Se, liquid, field and temp. depend. 1=4355
Se, oxygen-free, press. depend. 0=614
Se, polycrystalline, rel. to oxygen exposure 3=17893
Se, polycryst., temp. behaviour, effect of O_2 2=8278
Se, at pressures up to 30 000 atm 0=613
Se, space-charge limited currents 4=1619
Se, rel. to state of crystallization 1=14967
Se, temp. coeff. at high pressure 2=21156
Se, time rate of decrease, temp. depend. 0=18052
Se, under v. high press., metallic conduction 3=17812
Se, vitrous, space-charge limited 3=13081
Se—Te, liquid, temp. var., and chain struct. 4=24234
Si, current oscillations at high pulse voltages 1=19859
Si, current oscillations at high pulse voltages 2=4026
Si, effect of Ni interstitials, meas. 4=28453
Si–electrolyte boundaries, surface conductivity and recombination 1=17715
Si, rel. to electron irrad. 3=22859
Si, epitaxial films, meas. by i.r. reflectivity technique 4=28570
Si Esaki junctions, current excess rel. to temp. 2=23419
Si films, diffused, using four-point probe 2=2155
Si films, epitaxial, meas. methods 4=6989
Si films, meas. using three-point probe 4=28569
Si films, resistivity rel. to heat treatment 2=16709
Si, four-probe meas., accuracy 2=10479
Si, heat treatment effects 3=15579
Si, heavily doped, temp. depend. 4=4171
Si, heavily doped, 3 to 30°K 0=11697
Si, rel. to Hg, W, Mo, Pt impurities 4=10067

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Si, intermediate field-strength range, theory 2=21147
Si–mica capacitors, surface cond. in elec. field 1=12439
Si, microwave, of doped spheres 0=5243
Si, n-type, γ-irradiated 0=11701
Si, n-type, impurity 2=23356
Si, 0.002-10 000 ohm cm. resistivity, four-probe method 2=7530
Si, p-type, effect of deformation 0=13596
Si, p-type, impurity cond. at microwave freq. 4=4172
Si, p-type, I–V characteristics into breakdown region 2=21148
Si, p-type, resistivity minimum for oxidation conversion to n-type 4=12911
Si, p-type, space-charge-lim. hole injection and trap effects 4=6988
Si, pure, measurement 0=11698
Si, quasi-intrinsic, interelectron scatt. 3=20312
Si real surface, field effect and relaxations, 190°-620°K 4=10066
Si, resistance, rel. to pressure 3=18228
Si, resistivity at low temps., in electron activity meas. 0=592
Si, single crystals, effect of electron bombardment 0=18030
Si, small slices, resistivity meas., appl. of Siemen's method 4=28568
Si, surface 1=14454
Si, surface cond., boundary with electrolyte 2=16713
Si, surface, effect of dried O_2 2=6459
Si surface, rel. to temp. 4=12913
Si, temp. depend. when Ni -doped 4=4173
Si, thermal instability analysis 4=12909
Si, vacuum-cleaned surfaces 1=1066
Si, warm and hot electrons, anisotropy angle 4=10068
Si, zone-refined, p-type, in-pile coeff. 3=17867
Si: Ag 1=3688
SiC, n-type, transient recomb. meas. 3=10840
SiC, resistivity, up to 1300°K 1=17716
Si carbide, temp. depend. 2=8354
Si–Cr alloys, composition depend. 1=3797
Si–Fe alloys, resistivity anisotropy 1=14362
Si_3N_4, effect of C and Ti additives 2=8303
Si oxides in Si 2=23352
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SiO films, with Ag and Au, rel. to optical reflectivity 4=22888
SiO_2, fused, solid and liquid, 1000-2480°C 4=12962
SiO_2, surface, due to adsorbed molecules 3=25318
Sm, 1.3-300°K 1=5003
Sn, anisotropy due to Brillouin zones 4=26015
Sn, bulk, tunnel effect 1.36°-3.6°K 3=1901
Sn, effect of Ga film 1=14910
Sn, effect of quenched in defects 1=17507
Sn films, rel. to adsorbed O 3=16872
Sn, films, rel. to electrostatic charging 3=15545
Sn films, after quench-condensing 2=23242
Sn films, rel. to thickness 2=18636
Sn films during vacuum deposition 3=25327
Sn, 4.2°-1.65°K, rel. to sample size 3=2851
Sn, 4.2-293°K 4=17583
Sn(grey), charge carrier effective mass, from Knight shift 1=1283
Sn(grey), oriented single crystals, 77-273°K 1=8960
Sn, liquid, electron mean free path, by positron annihil. 4=199
Sn, at low temp., rel. to u. s. attenuation 0=1568
Sn, at melting pt., fusion curve det. at 10^5 atm 0=9840
Sn, 0-505°K deviation from Matthiessen's rule 4=1566
α-Sn, press. depend., theory 4=6790
Sn, resistance, rel. to purity of metal 2=12490
Sn, resistance, 10° to 14°K 3=2852
Sn, resistivity, 3·75°-4·22°K, and residual at 0°K 3=8491
Sn, superconducting, surface impedance 2=11565
Sn, surface impedance, 1.9 Mc/s, 4.2°K, mag. field depend. 0=20875
Sn, surface impedance at 3 Mc/s in mag. field 4=6916
Sn thin films, resistivity temperature coefficients 1=6127
Sn, zone refined, measure of purity 0=13962
Sn alloys, 4.2-348°K, deviations from Matthiessens' rule 0=1613
Sn base cast alloys, rel. to composition 3=20262
Sn–Cu alloy films, quenched 1=3725

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SnI_4, under v. high press., metallic conduction 3=17812
SnO_2 films, impurity-free 3=17897
Sn oxide films, plasma oscillation 0=1623
SnO_2, 100-900°C, Sb doped 4=6990
SnO_2, Sb-doped thin layers, temp. depend. 0=16036
SnO_2 semiconducting, elec. props. 0=15965
SnSe, n-type Sb-doped 1=17761
Sr, effect of temp. and pressure 3=25323
SrO, meas. as function of applied field and temp. 0=20873
SrO, nature at high temps, 2=18643, 21107
$SrO.2B_2O_3$ and $SrO.4B_2O_3$, lead-activated, rel. to luminescence 3=2925
$SrTiO_3$, 4.2°-300°K meas. 4=15559
$SrZrO_3$, effect of impurities 2=18644
Ta, effect of lattice defects 3=13037
Ta, 0°-1000° C 4=25869
Ta borides, carbides and nitrides 1=3707
Ta carbide, rel. to C content 4=13448
TaC, resistivity 2=2448
Ta_2O_5, induced by γ-rays and neutrons, time var. 4=20402
Ta_2O_5, on Ta, temp. and elec. field depend. 2=2126
Ta–Ta_2O_5–Au anodic film, low-freq. negative resistance 2=21108
Ta—Ta_2O_5—Au diodes, electron transport mechanisms 3=6611
Tb, 1.3-300°K 0=18002
Tb, 1.4°-500°K meas. 3=18113
Tb—Lu, effect of localized mag. moments 3=13033
Te 1=8958
Te, anisotropy investig. 3=17820
Te, anisotropy, theory 0=6127
Te, effect of annealing 1=3773
Te, effect of vacuum annealing 2=2113
Te films, amorphous 2=8284, 14500
Te films, in modulating elec. field 4=28575
Te, l. f. fluctuations, temp. depend. 0=15963
Te, liq., analysis 3=14168
Te liquid, up to 850°C 3=9474
Te, mobility of Tl, temp. depend. meas. 3=17791
Te, molten 3=9475
Te, molten, temp. depend., free-electron model 4=2707
Te, –100° to +200°C 2=2172
Te, purified, rel. to structural defects 3=17898
Te surfaces, oxygen influence 2=10436
Te and Te—Se liquid solns. 3=3813
Te, V–I characteristics, rel. to electron emission 0=1145
Th, temp. var. down to liquid He temps. 4=6918
Th, 25-1000°C 0=17894
ThC, resistivity from 4.2°-1200°K 4=28416
Th, carbide—iodide, at high temp. 3=23378
ThF_4, fused, electronic & ionic, 1100° C 3=1394
ThF_4–CaF_2 electrolyte 2=15149
Th—In alloys, rel. to temp. and press. 3=20886
Th nitrides and sulphides 3=16473
ThSe, p-type single crystals 0=18054
α-Ti, anomalous, rel. to thermal electron transitions 3=20127
Ti, 80-90 kbar 3=20887
Ti, sputtered films, effect of dissolved gases 3=25328
Ti, 20-850°C 2=20952
Ti, voltage signal at rapid phase change 2=4451
Ti—Al alloys, 20-1200°C 4=28536
Ti alloys, dilute 2=15854
Ti alloys, temp. depend. 4=28537
Ti borides, carbides and nitrides 1=3707
TiC 2=8305
TiC, change rel. to sintering 2=6842
TiC single crystals, metallic-type conduction 1=11260
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TiC—WC—Co, volume resistivity, Co depend. 3=3316
Ti ceramics, var. during ageing, relation to var. on injection into alkali halides 3=20380
Ti—Cr alloys, up to 1100°C 3=22898
Ti hydrides, 77°-300°K 3=13026
TiN, rel. to chemical binding 1=14870
TiN, rel. to chemical binding 1=20353
Ti oxides, composition depend. 0=6128
TiO, due to d-bands 3=25235
TiO, 80°-400° K 3=17894
TiO_2, elec. aging and regeneration 3=23000
TiO_2, $I \propto V^2$, polarization and space-charge effects 3=22954

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TiO_2, partly-reduced, 78°-700°K 4=10072
TiO_2, reduced, electronic cond. below 20°K, theory 2=2175
TiO_2, reduced, evidence for interstitial Ti 4=9948
TiO_2, resistivity rel. to semiconducting props. 1=20229
TiO_2, rutile, bibliography 3=17963
TiO_2, (rutile), changes during ageing 4=6984
TiO_2, (rutile) rel. to conduction mechanism model 2=23413
TiO_2(rutile), electron transfer in, onset of field emission 0=13579
TiO_2, rutile, rel. to lattice defects 3=22955
TiO_2(rutile), nonstoichiometric, anisotropy 0=15966
TiO_2, semiconducting, 2°-80° K 3=17895
TiO_2, space-charge limited currents 1=10035
TiO_2, temp. depend. 0=1697
TiO_2, temp. depend., degree of reduction 1=1084
Ti_2O_3, effect of V_2O_3 impurity 1=17640
Ti_2O_3, semicond. and metallic 1=11310
$TiSb_2$, theory 0=13577
Ti silicides 2=8305
Ti–TiO_2–Au anodic film, low-freq. neg. resist. 2=21108
Tl films, rel. to adsorbed O 3=16872
Tl films, effect of H_2, N_2, A, O_2 adsorption, thickness depend. 0=16953
TlBr, electronic cond., electrons transport no. 2=18650
TlCl, ionic conductivity 1=19838
Tl halides, pressure effects 2=18651
$TlNO_3$, molten 0=13466
$Tl_2O + Tl_2O_3$, electrodeposited films 2=10935
TlSe 2=18712, 23410
$Tl_2Se.As_2(Se, Te)_3$ vitreous, Te content correl. 0=15964
Tl_2Te_3—Bi_2Tl_3 3=18343
Tm, 1.3-300°K 0=18002
U, effect of neutron irradiation 3=25325
U, n effects, low temps., two-spike mechanism 4=6932
U, phase transition in α-type at 42°K 1=15135
α–U, resistivity, rel. to radiation effects 2=6392
U, temp. var. down to liquid He temps. 4=6918
U, resistivity of interstitial atoms and vacancies 3=25326
U, and U—Mo alloys in γ-phase 4=28388
U, var. with heat treatment, 4.2°-100° K 3=20270
U carbides 4=13611
UC, cast, effect of neutron irrad. 4=22664
UC, neutron irrad. 2=6414
UC, resistivity from 4.2°-1200°K 4=28416
UC, sintering, and diffusion activation energy meas. 4=13665
UC, temp. coeff., effect of oxygen 2=8307
UC, temp. depend. meas. 4=23225
UC, rel. to use as reactor fuel 2=12271
UFe_2, rel. to mag. moment of Fe atom 2=12497
UFe_2, resistivity meas. 3=1113
UGe_2 and USi_2 0=11834
UMn_2, rel. to mag. moment of Fe atom 2=12497
U–Mo alloy, γ-phase, rel. to Friedel band model 1=17450
U—Mo alloys, stable and metastable, (90°-1200° K) 1=10025
U–Mo–Nb alloys, from 1000°C 2=4453
U–Nb alloys, 90–1200° K anomalies 1=17609
U nitrides and sulphides 3=16473
U—O system from U_3O_8 to UO_2, temp. var. 4=6991
UO_2, 90-800° K 4=15546
UO_2, nonstoichiometric 1=17641
UO_2 single crystals, 90°-900°K 3=25372
UO_2, sintered, resistance anomaly 4=4205
UO_2—ZrO_2 system, a.c. at high temps. 3=10882
UO_3, 80-900°C 4=25992
UO_3, sintered, 298°–923°K 2=12496
UO_3–U_3O_8, rel. to phase transition, 25°-200°C 3=25371
U_3O_8, α-phase, rel. to temp. and O_2 pressure 4=1625
U_3O_8, 80-900° C 4=25992
US, 4.2-360°K 4=12842
U–Zr alloy, γ and δ, rel. to structure 2=620
V, anomaly at 245° K 1=7735
V and V–Cr solid solns 20°-293°K 2=10437
V borides, carbides and nitrides 1=3707
V oxides, composition depend. 0=6128
V oxides, energy spectrum, current carriers 3=6605
V_2O_3, conduction mechanism, 123-673°K 2=10496
V_2O_3 crystals, resistivity meas. 3=2927
V_2O_3—V_2O_5 system 4=12841
V phosphate glass, rel. to composition 2=8306

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V phosphate glass, $V^{5+}-V^{4+}$ electron exchange 2=8306
VSb_2, theory 0=13577
W, cold-worked, resistivity recovery 4=17480
W, damage index in neutron irradiation 0=20853
W, effect of lattice defects 3=13037
W, high temp. depend. 2=20953
W, reactor-grade, 4-120°K 0=11588
W, resist. ratio, residual, diameter and current depend. 4=20337
W, surface resistance, oscillatory, 1.6°K 3=2777
W wires, hot resistivity 3=10723
W wires, surface structure effect of d.c. 2=14930, 19040
W, zone-melted, resist. ratios 1.4°-27°K 4=20338
W borides, carbides and nitrides 1=3707
WC—Co, rel. to macroscopic structure 3=13497-8
W carbide—Co, rel. to thermal cond., Lorenz number and conc. 1=925
WO_3 3=13083
WO_3, Ag-doped 0=17922
$W_xTa_{1-x}Se_2$, x = 0.10-0.99 3=23029
Xe, ionized by m.h.d. shock tube, 5800, 8000°K 4=14581
Xe, plasma in anode-glow mode, neg. resistance 3=5635
Y single crystals, 1.3-300°K 0=2843
YFe garnet, effect of Nd substitution 2=21339
YFe garnet, by spin waves, meas. 3=8374
Y—Lu, effect of localized mag. moments 3=13033
Yb, effect of very high pressures 2=619, 10435
Yb, high-pressure, rel. to virtual bound state model 3=2756
Yb, 1.3-300°K 0=6080
Yb, 1.5-20.3°K 4=17473
Yb, 20-40 kbars pressure, semiconductivity 3=17899
Zn, effect of Ga film 1=14910
Zn, 4.2°-1.65°K, rel. to sample size 3=2851
Zn, by He temps. meas. 3=8492
Zn, high-purity meas. analysis 4=12865
Zn, liquid and solid, first princs. calc. 3=8395
Zn, low temp. thermal cycling 2=23776
Zn, low temp. thermal cycling 3=3233
Zn, molten, meas. 3=9475
Zn, recovery processes after neutron irrad. 4=4102
Zn, resistance, 10° to 14°K 3=2852
Zn amalgam, compressibility rel. to cond. 2=7210
Zn amalgams, temp. depend. 1=11757
Zn, amalgams, temp. depend. 1=12872
Zn antimonide 2=4042
$Zn_xCd_{1-x}Sb$ 4=12918
$Zn_xCd_{1-x}Sb$, effects of Te, Sn, Cu doping 0=2903-4
$Zn_xCd_{1-x}Sb$ solid solns. 2=23415
$ZnCl_2$, liquid 0=14626
Zn dilute alloys, low temp. anomaly 1=14364
ZnF_2, fused, electronic & ionic, 1100°C 3=1394
$ZnIn_2S_4$ 1=10066
Zn—Mn (0.4 at.%), low temp., spin ordering effects 4=17623
$Zn_xMn_{3-x}O_4$, rel. to composition and temp. 4=15555
$Zn_{1+x}Mn_{2-x}O_4$, rel. to composition and temp. 4=15555
ZnO 0=2849
ZnO crystals, Cu doped, trace impurities of Fe^{3+} 2=12819
ZnO crystals, impurity band interpretation 2=2117
ZnO, rel. to "edge" and green luminescence emission 3=3048
ZnO, effect of absorbed O 3=6679
ZnO, effect of illumination and adsorption 2=16759, 18753
ZnO, effect of O chemisorption 1=20741
ZnO, films, rel. to i.r. absorption 0=654
ZnO, rel. to H_2 and CO adsorption 2=8916
ZnO, heat treatment in Zn and air, Zn diffusion 0=569
ZnO, light depend., role of ionized donors 3=9629
ZnO, modified by Na_2O, Li_2O, $ZnSO_4$, ThO_2, rel. to work function 0=11718
ZnO, non-ohmic cond., rel. to u.s. amplification 3=12919
ZnO, pressure depend. 0=6085
ZnO—CuO sintered 1=3774
ZnO—TiO_2—NiO ceramics, temp. coefft. 3=13117
ZnP_2, red and black forms 3=16072
ZnS, due to bombardment, model 3=13208
ZnS, due to electron bombardment 2=18652
ZnS films, electron bombard., enhanced conductivity 0=15968
ZnS, under 60 keV electrons 4=13091
ZnS, surface 3=17900
ZnS : Cu 3=20345

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ZnS:Cu, Cu conc. depend. 2=18882
ZnS:Cu:Mn 1=10123
ZnSb 0=15967
ZnSb, electrical properties, rel. to temp. 3=25373
ϵ-Zn_3-Sb_2, 20-470°C 3=20346
Zn_4Sb_3, rel. to semiconducting props. 3=15597
β-Zn_4Sb_3, semiconducting, temp. var. 3=22956
ZnSb—CdSb films, var. with conc., temp. 4=12917
ZnSb-CdSb, ordering 2=18762
ZnSe, carrier mobility and shallow impurity states 3=10843
ZnSe, induced conductivity, by electron irrad. 2=6463
ZnTe, carrier mobility and shallow impurity states 3=10843
ZnTe films 0=15986
ZnTe, impurity doped, cond. mechanism 3=20327
ZnTe—CdTe, liquid, and phase diagram, dissociation 4=11185
ZnTe in Zn vapour, high-temp. cond. 4=17496
Zn titanate, effect of reactor irrad. 2=14507, 18646
Zr, crystal zone purified 4=17790
Zr, 51-59 kbar 3=20887
Zr, oxygenated, temp. depend 2=3983
Zr, voltage signal at rapid phase change 2=4451
Zr wires, 2=4472
Zr, zone melted, at liq. H and liq. N temp. 0=562
Zr borides, carbides and nitrides 1=3707
ZrC, and phase transform., ~2200°C, fruitless search 4=17774
$Zr_{0.84}Ca_{0.16}O_{1.84}$ ceramics, grain boundary action 4=7037
Zr hydrides, 1.2-400°K, optical mode scattering contribution 0=15884
ZrO_2, meas. rel. to O_2 pressure 3=12957
ZrO_2, stabilized, 550°-1200°C 3=20376
ZrO_2—CaO, fluorite phase 3=25728
ZrO_2—CaO and phase transform., order—disorder 4=17778
ZrO_2—La_2O_3 system, var. temp., freq., composition 4=25990
(87%)ZrO_2—(13%)La_2O_3, 1200°-1650°C 3=17901
ZrO_2—MgO 0=4321
ZrO_2 on Zr, temp. and elec. field depend. 2=2126
Zr-rare earth alloys, resistivity rel. to composition 2=21546
Zr-ZrO_2 system 2=4459
Zr-ZrO_2-Au anodic film, low-freq. negative resistance 2=21108
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alkali chlorides, fused, Cl^- transport number 0=6412
alkali halides, Walden's rule, modification under pressure 4=27193
alkali metal dissolved in molten alkali halides 3=18829
aq. solns., proton cond., energy of activation 1=15901
benzene, conditions for obeying Ohm's law 4=27192
binary electrolyte, alternating current 3=13610
binary electrolyte, total resistance irreversibility effect 3=16174
cell assembly, at high temp. and pressure 2=4547
cells, cathode polarization, analogue solution 0=1960
cells, characteristic curves 0=10352
conductive liquid saturation in porous medium 0=21279
demonstration, large scale 4=29222
diffusion, restricted, interference optics study 3=5434
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electrolytes, conductivity, relaxation effect 4=21500
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  - BeO, neutron irradiated 2=4337
  - BeO, rel. to neutron-irradiation, 100°-300°K 3=20255
  - BeO, temp. var. reduction by n irrad. 4=6762
  - BeO, 1000°-2000°C 4=9866
  - Bi 1=920
  - Bi 3=10808
  - Bi 4=12882
  - Bi, near melting point 1=9990
  - Bi, near melting point 1=11171
  - Bi rod, under u.s. vibrations 1=9985
  - Bi_2S_3, thermal energy gap in films 1=19871
  - Bi–Sb–Te 0=2915
  - Bi–Sn alloys, effect of melting 1=19730
  - Bi–Sn alloys, effect of melting 2=3856
  - BiTe, rel. to Seebeck currents 1=14188
  - Bi_2Te_3 0=2915
  - Bi_2Te_3 1=1115
  - Bi_2Te_3 2=4079, 8449
  - Bi_2Te_3 4=13530
  - Bi_2Te_3 alloys, 100°–300°K 4=10141
  - Bi_2Te_3, anisotropy rel. to u.s. absorption 2=23054
  - Bi_2Te_3, Ge doped, meas. 4=28380
  - Bi_2Te_3, rel. to impurity substitution 1=17719
  - Bi_2Te_3, at low temp., theory 1=12359
  - Bi_2Te_3, n-type, thermal diffusivity 2=4080
  - Bi_2Te_3–Sb_2Te_3 0=16002
  - Bi_2Te_3–Sb_2Te_3, p-type, 80°-370°K 2=23372
  - $Bi_2Te_{2.7}Se_{0.3}$ 3=10895
  - $Bi_2Te_{2.1}Se_{0.9}$, doping effects of Pb, I, and Ag 1=8968
  - $Ca_XBa_{1-X}TiO_3$, 40°-150°C 3=20122
  - CaF_2, lattice conductivity 2=16616
  - CaF_2, 3-300°K 1=8889
  - Cd, superconducting, anisotropy 1=18724
  - $CdGeAs_2$ 3=8518
  - $CdGeAs_2$, 100-700°K 3=20118
  - CdS, lattice, phonon scatt. analysis 4=15411
  - CdSb, anisotropy, 100°-420°K 4=30530
  - CdSb, var. with temp. 2=20949
  - CdSb, variation with temp. 3=2740
  - CdSb–ZnSb, 90-400°K 4=1592

Conductivity, thermal—contd
- **solids**—contd
  - CdSb–ZnSb system 0=18401
  - Cd–Sn alloys, effect of melting 1=19730
  - $CdSnAs_2$ 1=8952
  - $CdSnAs_2$ 3=8518
  - $CdSnAs_2$, 100-700°K 3=20118
  - CdTe, doped with I, resistance var. 2=23084
  - CdTe, fall nr. Debye temp. rel. to acoustic–optical phonon scatt. 3=17670
  - CdTe, lattice, phonon scatt. analysis 4=15411
  - CdTe, rel. to phonon scatt. by mag. impurities 4=9871
  - CdTe–CdSe alloys, rel. to composition 4=22706
  - CdTe–HgTe system 2=23084
  - Ce sulphides, 4-1300°K 2=8451
  - $CoCl_2.6H_2O$, mag. field depend., 1-4.2°K 2=23092
  - CoF_2, 3-300°K 1=8889
  - CoO, rel. to phonon–spin interactions 2=23082
  - $CoSb_3$, effects of doping 0=607
  - CoZn ferrites, mag. field effects, 1.4-25°K 1=4972
  - Cr nitrides 3=865
  - Cr spinellides, rel. to temp. 4=9868
  - $CrSi_2$–$MnSi_2$ 1=3797
  - Cu 1=920
  - Cu, anomalous Lorenz parameter 2=21095
  - Cu crystal lattice imperfections, screw dislocations, temp. var. 4=4002
  - Cu, determination by Angström's method, effects of modification 4=22512
  - Cu, dilute alloys of, 4-120°K 0=9863
  - Cu, Kapitza resistance meas. 3=12017
  - Cu, Lorenz parameter, anomalous, at He temps. 4=17471
  - Cu, below 1°K 4=6757
  - Cu, below 1°K, rel. to impurities 4=9874
  - Cu, phonon and electron components, separation methods 3=12930
  - Cu, point defects annealed, effects of 4=1455
  - Cu, thermal link, heat transfer to CrK alum, 0.03° to 0.15°K 1=16141
  - Cu, 2-4°K, Lorenz number 0=15885
  - Cu wire, 0.1 cm dia., 16 cm long, Angströms method adaptation 4=30526
  - Cu alloys, dilute, lattice conduct. meas. 3=15450
  - Cu alloys, lattice component, low temps. 2=23085
  - Cu alloys, lattice, at liq. He temp. 2=20948
  - Cu alloys, lattice, low temp., and elec., temp. var., Pippards's theory 4=17362
  - Cu–As alloy, effect of plastic deformation and annealing 0=21131
  - $CuCl_2.2H_2O$, mag. field depend., 1-4.2°K 2=23092
  - Cu_2O, effect of crystal structure 2=12392, 14393
  - Cu–Pb–Cu sandwiches, at liq. He temp. 3=24150
  - Cu–Pb–Cu sandwiches, 1.3° to 4.0°K 4=9873
  - Cu-rich alloys 1=920
  - Cu–Si alloy, cold worked 2=3916
  - Cu–Zn alloys 0=9865
  - Cu–Zn alloys, effect of plastic deformation and annealing 0=21131
  - Cu–Zn, lattice component, 1.1-4.2°K 0=6024
  - Cu–Zn, as meas. of dislocation density 0=1579
  - Dy, polycryst., 5°-305°K, rel. to mag. transitions 4=9872
  - Fe 0=2797
  - Fe, α–γ phase transformation detection 0=14043
  - Fe, meteoritic 3=11526
  - Fe, below 1°K 4=6757
  - Fe, pure and alloyed, expt. analysis 2=2111
  - $FeAl_2O_4$–$MgAl_2O_4$ mixed crystals 4=20514
  - Fe–Ni, in mag. field at low temp. 3=8489
  - Fe_3O_4, rel. to phonon–spin interactions 2=23082
  - Fe_3O_4, 3°-300°K meas., rel. to phonon mechanisms 2=10342
  - $FeSi_2$—4% $CoSi_2$ alloy 3=5547
  - Ga, anisotropy, 83-293°K 3=17671
  - Ga, electron cond., anisotropy 0=7026
  - Ga, in intermediate supercond. state 1=4973
  - Ga, near melting point 1=9990
  - Ga, near melting point 1=11171
  - Ga, 300°-1200°K rel. to doping 3=10611
  - GaAs, effect of 2 MeV electron irrad. and annealing 4=28381
  - GaAs, rel. to high defect concn. 3=791
  - GaAs, intrinsic and heavily doped, 300°-900°K 4=1414
  - GaAs, lattice, phonon scatt. analysis 4=15411
  - (Ga,In)As alloys, disordered, lattice theory 3=25207

Conductivity, thermal — contd
- **solids** — contd
  - GaSb, lattice, phonon scatt. analysis 4=15411
  - GaSb, at low temp. 0=6119
  - GaSb—InSb alloys, rel. to that of InSb 4=28383
  - Ga_2Se_3, temp. depend. 0=545
  - Ga_2Te_3 1=17744
  - Gd, 5-310°K, Lorenz function, and ferro—paramagnetic transition 4=12661
  - Ge 1=920
  - Ge 4=13532
  - Ge crystal lattice imperfections, screw dislocations, temp. var. 4=4002
  - Ge, rel. to deformation 4=1410
  - Ge, doped with Sb and Ga, piezothermal cond., liq. He temp. 3=10766
  - Ge, equivalence in p- and n-type 2=20950
  - Ge, rel. to fast neutrons 3=17674
  - Ge, fast neutrons effects 4=4003
  - Ge, on fast neutron bombard. 4=10012
  - Ge, 40-425°C, electron and phonon contrib. 0=20756
  - Ge, high-temp. 2=1289
  - Ge, lack of difference between p- and n-type 3=2741
  - Ge, lattice thermal cond., analysis 4=6756
  - Ge, n and p-type, 80-440°K 0=15930
  - Ge, n-type, low-temp., calc. using new phonon-scattering mechanism 1=8887
  - Ge, p-type, 0.2°-4°K, meas. 2=10464
  - Ge, phonon scattering by bound electrons 1=12429
  - Ge, strain effects, 1.5-4.2°K 2=3854
  - Ge, thermal shock behaviour rel. to conductivity 4=6763
  - Ge, 3-1020°K 0=17903
  - Ge, 300°K 1=16133
  - Ge, 300°-1200°K, rel. to doping 3=10611
  - Ge, by u.s. absorption, 100°-400°K 2=23054
  - Ge—Si alloy single crystals, 2-50°K 1=7543
  - Ge—Si alloys, disordered, lattice theory 3=25207
  - Ge—Si alloys, at high temps. 3=10616
  - Ge—Si alloys, 300-1200°K 2=3855
  - Ge—Si mixtures, rel. to isotopic phonon—phonon scatt. 2=23090
  - H, para—ortho mixtures at 20°K 2=7254
  - H_2O, D_2O, liquid N and H temps. 4=12660
  - He, effect of isotopic lattice distortion 1=11198
  - He^3, rel. to density 0=19545
  - He^3, He^4 4=18525
  - He^3—He^4, lattice cond., analysis 1=7544
  - He^3—He^4 mixtures, 1.1-2.1°K 0=12549
  - He^3—He^4 mixtures, theory 0=19544
  - He^4 4=21387
  - He^4, lattice, rel. to density, theory 3=321
  - Hg, pure, near T_c, normal and superconducting 4=6765
  - Ho ethyl sulphate, effect of mag. field on thermal resistance 2=16618
  - Ho ethyl sulphate, mag. field depend. 2=14397
  - Ho ethyl sulphate, optical phonons model 3=10613
  - In 3=17668
  - In 4=22514
  - In film, supercond., mag. field effect 4=18608
  - In, normal and superconducting 1=16201
  - In, normal and superconducting, 1.3-4.2°K 0=20755
  - In, below 1°K 0=8937
  - In, —190 to 120°C range 2=23088
  - In—sapphire boundaries, thermal resist., for supercond. and normal In 4=28385
  - In, size effects, and electron m.f.p., supercond. and normal 4=21415
  - InAs, high-temp. 2=1289
  - InAs, impure, at high temps. 0=20757
  - InAs, intrinsic and heavily doped, 300°-900°K 4=1414
  - InAs, low-temp. 2=23398
  - InAs, at low temps. 3=6596
  - InAs—CdTe alloys, n-type, up to 400°C 4=22717
  - InAs—CdTe system, meas. 4=6759
  - InAs—In_2Se_3 system 4=1611
  - InAs—$ZnGeAs_2$ system, meas. 4=6759
  - InAs—ZnTe system, meas. 4=6759
  - In—Bi superconductors, mixed, var. mag. field 4=18572
  - In—Bi (3 at. %), superconductive, 2.16°K, var. mag. field 3=12032
  - (In, Ga)As, alloying depend. 0=2897
  - In—Hg supercond. alloys, dilute 2=7510
  - In—Hg, supercond., phonon conduction 2=11561

Conductivity, thermal—contd
- **solids**—contd
  - InP, intrinsic and heavily doped, 300°-900°K 4=1414
  - InP, undoped, rel. to optical mode scatt. 4=12662
  - InSb, change in mag. field 3=1850
  - InSb, effect of 2 MeV electron irrad. and annealing 4=28382
  - InSb, high-temp. 2=1289
  - InSb, 10-50°K, rel. to impurity scatt. 0=547
  - InSb, 40-425°C, electron and phonon contrib. 0=20756
  - InSb, lattice conductivity 2=16616
  - InSb, lattice, phonon scatt. analysis 4=15411
  - InSb, mag. field effects, 20°-500°K 0=15821
  - InSb (1.2-4.0°K) 3=4830
  - InSb, 195-715°K 1=7649
  - InSb, 300°K 1=16133
  - InSb—In_2Te_3 alloys, 80° to 500°K 4=9870
  - InSb—Sb eutectic alloys 3=23401
  - In_2Te_3 1=17744
  - In_2Te_3, α- and β-forms, annealing effects 1=2381
  - In_2Te_3, 200°—400°K, additional due to e.m. radiation 1=11169
  - In_2Te_3—InAs 3=1345
  - KBr, rel. to deformation 4=1410
  - KBr, doped, application of Debye model 4=6760
  - KBr, effect of interstitial ions 2=21088
  - KBr, rise nr. Debye temp. rel. to optical phonon heat transport 3=17670
  - KCl, rel. to acoustic relaxation 2=2059
  - KCl, rel. to deformation 4=1410
  - KCl, effect of interstitial ions 2=21088
  - KCl, fall nr. Debye temp. rel. to acoustic—optical phonon scatt. 3=17670
  - KCl, KNO_2 doped, phonon resonance scatt., calc. rel. to expt. 2=20946
  - KCl, with KNO_2, temp. var., phonon—defect reson. interaction 4=17382
  - KCl, rel. to phonon scatt. processes, at low temps. 2=10341
  - KCl-KBr solid solutions, at liquid He temp., phonon scatt. by point defects 0=13506
  - KI, rel. to deformation 4=1410
  - KNO_3, decrease at 130°C due to phase change 1=9991
  - Kr solidified 2°K - melting pt. 0=9868
  - LaCo nitrate, rel. to spin—phonon interactions 3=8375
  - $La_2Co_3(NO_3)_{12}.24H_2O$ and phonon scatt., paramag. res., low temps. 3=15427
  - $LaCoO_3$, meas., heat transfer processes 4=30532
  - LiF, rel. to deformation 4=1410
  - LiF, effect of F-centres 0=11632
  - LiF, neutron and γ-irrad. 0=1575
  - LiF, Kapitza resistance meas. 3=12017
  - LiF, rel. to Li isotope ratio, 10-90°K 0=9901
  - LiF, with varying conc. of Li^6 and Li^7 0=9864
  - $MgAl_2O_4$, 3°-300°K meas., rel. to phonon mechanism 2=10342
  - Mg_2Ge, rel. to temp. to 300°C 3=12931
  - Mg_2Ge, 300°K 1=16133
  - $Mg_2Ge_xSi_{1-x}$, 250°-600°K meas. 3=13142
  - MgO, rel. to phonon—spin interactions 2=23082
  - MgO, 3°-300°K, meas. 2=10342
  - Mg_2Si, rel. to temp. to 300°C 3=12931
  - Mg_2Si—Mg_2Sn solid solution 2=8453, 14593
  - Mg_2Sn, 300°K 1=16133
  - MnF_2, antiferromag., lattice thermal cond. theory 3=25212
  - MnF_2, rel. to phonon—spin interactions 2=23082
  - MnF_2, 3-300°K 1=8889
  - MnO, rel. to phonon—spin interactions 2=23082
  - MnZn ferrites, mag. field effects, 1.4-25°K 1=4972
  - Mo, 900°—2200°C 1=9988
  - Mo, 1000° C to melting pt. 1=17416
  - Mo, 1000-1400°C 2=9417
  - Mo, phonon and electron components, separation methods 3=12930
  - Mo, reactor-grade 4-120°K 0=11588
  - Mo, up to 1700°K 3=14395
  - Mo above 2300°K 0=14876
  - MoS_2, at 80°C 3=8376
  - Mo silicides, electron and lattice contribs. 3=25213
  - NH_4NO_3, thermal gramsfornations data 2=6762
  - NaCl, rel. to acoustic relaxation 2=2059
  - NaCl with Ag, Br, K impurities, 100° to 380°K, rel. to phonon scattering 3=10584
  - NaCl, with $CaCl_2$ impurity, temp. var. 3=20120

Conductivity, thermal—contd
- **solids**—contd
  - NaCl, rel. to deformation 4=1410
  - NaCl, by dislocation phonon scattering 3=22646
  - NaCl, effect of crystal interstitials due to H_2O, 1.5-40°K 4=17351
  - NaCl, effects of Li^+, I^-, Rb^+, Ag^+, Br^-, K^+ impurities 3=22644
  - NaCl, effect of precip. of dissolved $MnCl_2$ 1=14190
  - NaCl, fall nr. Debye temp. rel. to acoustic—optical phonon scatt. 3=17670
  - NaCl, low-temp. variations due to O content, phonon scatt. 1=8888
  - NaCl, rel. to phonon scatt. by impurity ions 2=10324
  - NaCl, rel. to phonon scatt. by impurity ions 3=6473
  - NaCl, plastically deformed 4=1411
  - NaF, rel. to phonon scatt. processes, at low temps. 2=10341
  - NaI, rise nr. Debye temp. rel. to optical phonon heat transport 3=17670
  - $NaNO_2$, temp. depend. rel. to ordering 2=3858
  - $NaNbO_3(1-x)KTaO_3$, x, rel. to phase diagram 2=14919
  - Nb, normal, supercond. state 2=6292
  - Nb, normal and supercond., strained 0=10843
  - Nb, O°-1000° C 4=25869
  - Nb, 0.2-4.2°K 2=8183
  - Nb, 1·6-15°K meas., electronic and lattice 3=25215
  - Nb, superconducting, effect of plastic deformation 0=8938
  - Nb_3Sn, supercond., temp. var. 4=21423
  - $NdCoO_3$, meas., heat transfer processes 4=30532
  - Ne, rel. to phonon processes, at low temps. 2=10341
  - Ne, 2°K - melting pt. 0=9868
  - Ni and Ni alloys, effect of impurity and alloying element concentration 1=9987
  - Ni, pure, in mag. field at low temp. 3=8489
  - Ni–Cr–Fe alloys, 20–900°C, Lorentz number calc. 4=15424
  - NiO, rel. to phonon–spin interactions 2=23082
  - $Ni_{1-x}Zn_xFe_2O_4$ 3=4831
  - NiZn ferrites 3=17669
  - NiZn ferrites, 50-350° C 3=20618
  - Ni–Zn ferrites, 20°-400°C meas. 3=25214
  - Ni—Zr(2, 0.2 at.%), 1.6-12°K, normal and superconducting 4=4006
  - Pb film, supercond., mag. field effect 4=18608
  - Pb, in intermediate supercond. state 1=4973
  - Pb and Pb–Bi, normal and supercond., strained 0=10843
  - Pb, pure, near T_c normal and superconducting 4=6765
  - Pb, superconducting, effect of plastic deformation 0=8938
  - Pb, 300°K 1=16133
  - Pb alloys, with In or Bi, normal and supercond. phases 1=12360
  - Pb–Bi, superconducting, effect of plastic deformation 0=8938
  - PbS, lattice conductivity 2=16616
  - PbS, n- and p-type, 4-100°K 0=18080
  - PbSe, carrier contribution 1=14189
  - PbSe, carrier contribution 1=17432
  - PbSe, 4-100°K 0=18080
  - PbSe, rel. to impurities 90° to 430°K 2=23401
  - PbSe, rise nr. Debye temp. rel. to optical phonon heat transport 3=17670
  - PbSe, temperature variation 0=20946
  - $PbSe-Bi_2Se_3$ system, rel. to composition 3=25742
  - $PbSe-Sb_2Se_3$ system, rel. to composition 3=25741
  - PbTe 2=14592
  - PbTe, carrier contribution 1=14189
  - PbTe, carrier contribution 1=17432
  - PbTe, rel. to deformation 4=1410
  - PbTe, 4-100°K 0=18080
  - PbTe, impurity influence 1=19729
  - PbTe, impurity influence 2=3857
  - PbTe, rel. to temp. 1=19916
  - PbTe, rel. to temp. 2=4082
  - PbTe–SnTe system alloys 4=23275
  - Pt, 0-950°C, possibility as reference material 3=25216
  - Pt, suitability as standard 4=11385
  - Rh 0=2797
  - Ru, down to 2°K 4=12863
  - Sb 1=920
  - Sb, temp. depend. 4=1588
  - SbI_3 4=1624
  - $Sb_2Te_3-Bi_2Te_3$ solid solution 2=4079, 8449
  - $Sb_2Te_3-Bi_2Te_3-Te$ solid soln. 2=22074

Conductivity, thermal—contd
- **solids**—contd
  - SbTeI 4=1624
  - SbZn–SbCd 0=16002
  - Se, crystalline and amorphous, 85° to 450°K 4=28386
  - Se, effect of added Br 0=6057
  - Se, effect of halogen content 0=546
  - Se polycrystals, effect of Tl impurities 1=9989
  - Se polycrystals, effect of Tl impurities 1=11170
  - Se, with Sn and Bi impurities 0=11589
  - Si 1=920
  - Si, doped with O, P, B, 5° to 300°K 2=23083
  - Si, effect of neutron irrad., 80°-300°K 4=4004
  - Si, effects of Sn impurities, theory 4=9829
  - Si, fast neutrons effects 4=4003
  - Si, 40-425°C, electron and phonon contrib. 0=20756
  - Si ingots during growth, calc. 2=14955
  - Si, Kapitza resistance meas. 3=12017
  - Si, lattice cond., rel. to impurities 3=10610
  - Si, lattice thermal cond., analysis 4=6756
  - Si, low-temp., mechanism rel. to purity 1=19863
  - Si, meas. high-temp. 2=1289
  - Si, neutron-irrad. damage, rel. to recovery and annealing 4=4005
  - Si, rel. to phonon processes at low temps. 2=10341
  - Si, 680-1000°K 3=22671
  - Si, 3°K to melting point, meas. and theory 4=17383
  - Si, 30–425 °C 1=19731
  - Si, 300°K 1=16133
  - Si 300°-1200°K, 3=10611
  - Si, 300°-1400°K 3=15449
  - SiC 2=10343
  - Si—Cr alloys, composition depend. 1=3797
  - SiO_2, rel. to defect sites 4=28387
  - Sn below 1°K 0=8937
  - Sn film into liq. He 4=24470
  - Sn film, supercond., mag. field effect 4=18608
  - Sn, in intermediate supercond. state 1=4973
  - Sn, near melting point 1=9990
  - Sn, near melting point 1=11171
  - Sn, normal and superconducting 1=16201
  - Sn, in normal and superconducting states, meas. 1=17433
  - Sn–In alloys, in intermediate state, 2°K to transition temp. 0=7033
  - Ta above 2300°K 0=14876
  - Ta, normal, supercond. state 2=6292
  - Ta, normal and supercond., strained 0=10843
  - Ta, 0.2-1.2°K 2=8183
  - Ta, O°-1000° C 4=25869
  - Ta, 1000° C to melting point 1=17416
  - Ta–Nb mixed single crystals, normal and superconducting, rel. to composition 4=15438
  - Te, rel. to deformation 4=1410
  - Te, 80-650°K 2=20951
  - Te single crystals, 80-650°K 3=6483
  - TeI 4=1624
  - Ti, below 1°K 4=6757
  - Ti, 20-850°C 2=20952
  - TiC, 200°-2000°C 4=20227
  - TiN, 200°-2000°C 4=20227
  - Ti alloys, 20-850°C 2=20952
  - Tl in normal and superconducting states, meas. 1=17433
  - $Tl_2Te_3—Bi_2Tl_3$ 3=18343
  - U, effect of neutron irrad. from electrical cond. variation 3=25325
  - U, and U—Mo alloys in γ-phase, 4°-40°K 4=28388
  - UC, 100°-700°C 3=7079
  - UC and UC_2, rel. to temp. 4=13611
  - UO_2, changes at high-temp., theory 4=12664
  - UO_2, effect of neutron irrad. 4=22653
  - UO_2, high temperatures 1=14191
  - UO_2, during irradiation 2=3860
  - UO_2, at low temp. 2=3859
  - UO_2, low temp., n irrad., spin–phonon effects 4=17386
  - UO_2 rods 0=6962
  - V, normal, supercond. state 2=6292
  - V, normal and supercond., strained 0=10843
  - V, superconducting 3=1904
  - W, high temp. depend. 2=20953
  - W, Kapitza resistance meas. 3=12017
  - W, phonon and electron components, separation methods 3=12930
  - W, reactor-grade, 4-120°K 0=11588

- **Conductivity, thermal**—contd
  - **solids**—contd
    - W, up to 1700°K 3=14395
    - W above 2300°K 0=14876
    - W carbide—Co rel. to elec. cond., Lorenz number and conc. 1=925
    - $W_xTa_{1-x}Se_2$, x = 0.10-0.99 3=23029
    - YFe garnet, low-temp. depend. 2=10344
    - Zn, superconducting, anisotropy 1=18724
    - Zn blende-type lattice, rel. to degree of ionicity 4=9869
    - $Zn_xCd_{1-x}Sb$, effects of Te, Cu, Sn doping 0=2903-4
    - ZnF_2, lattice conductivity 2=16616
    - ZnF_2, rel. to phonon–spin interactions 2=23082
    - ZnF_2, 3-300°K 1=8889
    - $ZnGeAs_2$ 3=8518
    - $ZnGeAs_2$, 100-700° K 3=20118
    - $ZnSO_4$, 2-20°K, effect of $FeSO_4.7H_2O$ impurity 1=3612-13
    - $ZnSO_4.7H_2O$, containing Fe^{++}, and phonon diffusion 4=1383
    - $ZnSO_4.7H_2O$, below 10° K, effect of H_2O and acetone vapours 1=14192
    - ZnSb, rel. to thermoelec. power and elec. cond. 2=657
    - $ZnSnAs_2$ 3=8518
    - $ZnSnAs_2$, 100-700° K 3=20118
    - $ZnSnAs_2$, ordered, disordered phases 2=23417
    - ZrC, 200°-2000° C 4=20227
  - **measurement**
    - adiabatic meas. using Peltier coeff., corrections 4=30529
    - Angström's method, adaptation 4=30526
    - apparatus for gases in critical region 3=3832
    - apparatus, 1.7° to 300°K 2=19745
    - apparatus, for organic liquids, with optical temp. meas. 0=8660
    - apparatus, precision, for low cond. 3=4831
    - apparatus for range −150 to 100°C, solids 0=2276
    - apparatus, to 3650°C 0=12531
    - Au—Fe alloy thermocouples, use at low temp. 4=8537
    - catharometry, gas-chromatographic, compensated Wheatstone bridge circuit 0=10379
    - coaxial cylinder cell, for gases 2=19743
    - comparison method for small metal samples 0=6964
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    - gas detector using thermistors 1=6971
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- Cu—Be, secondary electron yield under [illegible] 4=8828
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- CuBr, exciton, absorpt. and refl. spectra 3=4975
- CuBr, films absorption spectra rel. to Br excitation 2=[illegible]
- CuBr, luminescence, intensified by A and H 1=2454
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- CuBr, spectrum, new band system 3700–4000A 4=30426
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- Cu—Cd cpds. formed by liquid Cd on Cu 0=17972
- CuCd$_3$, X-ray study of ε-phase 3=[illegible]
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- CuCl, absorption edge, pressure effects, to 140 kbars 1=8866
- CuCl absorpt. and refl. spectra 3=15676
- CuCl, absorption spectra at 4.2°K 0=11761
- CuCl, absorption spectrum, fine structure, temp. depend. 2=8527
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- CuCl, edge luminescence, excitation curves, 77°K 4=1766
- CuCl, exciton, absorpt. and refl. spectra 3=4975
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- CuCl$_2$.2H$_2$O, Cl n.m.r., 1.1–4.24°K 3=[illegible]
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- CuCl$_2$.2H$_2$O, specific heat in spin-wave region (0.2–0.55°K) 1=[illegible]
- CuCl$_2$.2H$_2$O, spin arrangement 1=[illegible]
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$CuCr_2O_4$, crystal distortion from Jahn—Teller effect 0=10114
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Cu—Fe (<0.02 at.%), conductivity, elec., low temp. min., effect of Sn impurity 4=20330
Cu—Fe, dilute, elec. resistivity 0=17996
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$CuFe_2O_4$, influence of Mn_3O_4 on cubic spinel structure 1=15094
$CuFeS_2$, antiferromagnetic props. 1=11458
$CuFeS_2$, elec. props. meas. 2=18888
$CuFeS_2$, elec. props. —140 to 300°C 0=7938
$CuFeS_2$, magnetic, electrical props. 1=19872
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$CuFeS_2$, magnetic structure 0=3101
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$CuInTe_2$ semiconductor, prep. and props. 3=864
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$CuK_2Cl_4.2H_2O$, low temp. e.s.r. line structures 4=26390
$CuK_2Cl_4.2H_2O$, mag. and sp. ht. meas. between 0.04 and 1.5°K 4=17648
$CuK_2Cl_4.2H_2O$, paramagnetic relaxation at low temp. 1=14793
$K_2CuCl_4.2H_2O$, paramag. res. and absorption 0=3129
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$CuK_2(SO_4)_2.6H_2O$, e. s. r., low temp. var. 4=23045
$CuK_2(SO_4)_26H_2O$ paramag. res., saturation 0=10223
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Cu—Mg, thermodynamics of formation of compounds 1=1437
Cu–Mg–Al ferrite, tensor permeability meas. 2=22155
Cu—Mn, anelastic piezoresistance, stress-induced ordering 4=12847
Cu–Mn, anomal. Hall effect, field and temp. depend. 0=17991
Cu–Mn, anomalous mag. props. 0=1810
Cu–(1 and 0.13 at.%) Mn alloys, anomalous specific heat, down to $<0.1°K$ 4=17361
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Cu–Mn, dilute, specific heat, theory 0=11583
Cu–Mn, dilute, thermal expansion at low temps. 2=14388
Cu–Mn, elasticity and antiferromagnetism 0=13846
Cu–Mn, elec. and mag. behaviour 0=10092
Cu–Mn, electronic spec. ht. 2=2055
Cu–Mn, exchange anisotropy 0=10121
Cu—Mn, ferromag.—antiferromag. model 3=20585
Cu–Mn, ferromag.–antiferromag. props. 2=2275
Cu–Mn, heat capacity 1.4-20°K 0=9859
Cu—Mn, heat capacity anomaly at Néel point 1=8879
Cu–Mn, mag. props. 0=11915
Cu–Mn, mag. susceptibility 0=10100
Cu—(22·8%)Mn, magnetization and magnetocalorfic effect 3=8694
Cu–(22.8 at.%)Mn, magnetoresistance, 15 kOe, rel. to temp. 3=13031
Cu–Mn, magnetoresistance at liq. He temps. 2=3991
Cu—Mn, magnetoresistivity, He temp. 4=10026
Cu—Mn, molten, mag. susceptibility 1=152
Cu–Mn, n. m. r. 0=6280, 10247
Cu–Mn, negative magnetoresistivity at low temp. 2=18641
Cu–Mn, paramag. resonance, theory 0=16166
Cu–Mn alloys, paramag. susceptibility, 100-1100°K, composition depend. 4=26269
Cu–Mn, physical props. 0=20868
Cu–Mn, polycryst., mag. props. rel. to temp. and field 1=20046
Cu—Mn, polycryst., mag. props. rel. to temp. and field 3=4997
Cu—Mn, resistivity 1=14729
Cu–Mn, specific heat, anomalies 2=8171
Cu—Mn, specific heat at low temp. 1=17419
Cu—Mn, specific heat and mag. props. at low temps. 4=7299
Cu–Mn, specific heat, 1.4° to 5°K 2=8170
Cu–Mn, specific ht., 1.3-20°K, in mag. fields 0=18408
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Cu—Mn, thermal ageing, Young's mod., elec. cond., hardness 1=1297
Cu—Mn alloys, thermal expansion at low temp., expt 4=17369
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Cu—Mn—Al, κ-phase, neutron diffrn. study 3=11093
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$CuMn_2O_4$, cation disposition, inversion 3=20846
$CuMn_2O_4$, magnetic distortion, lack of 3=1009
$Cu_xMn_{3-x}O_4$, elec. cond., tetragonal distortion, prep. 4=15555
Cu_2MnSb, Heusler alloy, antiferromag. and paramag. props. 2=14812
Cu_2MnSn, transformations studied 1=15132
Cu-Mo electrodeposits, intergranular brittleness 3=3237
Cu—MoC, arc stability 1=1899
$Cu(NH_4)_2(C_2O_4)_2.2H_2O$, crystal structure 2=23857
$Cu(NH_4)_2Cl_4.2H_2O$, crystal structure meas. by e. s. r. 4=10319
$Cu(NH_4)_2Cl_4.2H_2O$, e.s.r. of Cu^{2+} 4=20589
$Cu(NH_4)_2Cl_4.{}_2H_2O$, e.s.r. measurements 0=11933
$Cu(NH_4)_2Cl_4.2H_2O$, mag. and sp. ht. meas. between 0.04 and 1.5°K 4=17648
$Cu(NH_4)_2Cl_4.2H_2O$, simple Heisenberg ferromagnetism, expt. 4=7252
$Cu(NH_4)_2Cl_4.2H_2O$, spin—lattice power transfer parameter 1=9066
$Cu(NH_3)_4(NO_3)_2$, crystal structure 1=9140
$Cu(NH_3)_4PtCl_4$, single-crystal structure 1=4056
$Cu(NH_3)_2SO_4$ magnetic susceptibility (1.5°-20.4°K) 1=14765
$Cu(NH_3)_2SO_4$, mag. susceptibility, interaction and crystalline field 0=21027
$Cu(NH_3)_4\cdot SO_4$, mag. susceptibility and spec. ht. at low temp. 3=1060
$Cu(NH_3)_4SO_4.H_2O$, e.s.r. 2=10694
$Cu(NH_3)_4SO_4.H_2O$, exchange-coupled linear chains 4=26351
$Cu(NH_3)_4SO_4.H_2O$, exchange interactions 4=10245
$Cu(NH_3)_4SO_4.H_2O$, mag. susceptibility, interaction and crystalline field 0=21027
$Cu(NH_3)_4SO_4.H_2O$ magnetic susceptibility (1.5°-20.4°K) 1=14765
$Cu(NH_3)_4SO_4.H_2O$, sp. ht. below 1°K 1=19719
$Cu[NH_4(SO_4)]_2.2H_2O$, cell dimensions 2=4429
$Cu[(NH_4(SO_4)]_2.6H_2O$, cell dimensions 2=4429
$Cu[(NH_4)SO_4]_2.6H_2O$, change of structure transition at 67°C 1=14936
$Cu(NH_4)_2(SO_4)_2.6H_2O$, e. s. r., low temp. var. 4=23045
$Cu(NH_4)_2(SO_4)_2.6H_2O$, paramagnetic relaxation times at low temp. 1=14675
$Cu(NH_4)_2(SO_4)_2.6H_2O$, spin–spin relax., and paramag. res. 2=4273
$Cu(NO_3)_2$, anhydrous, organic solns., e.s.r. 4=11216
$Cu(NO_3)_2.2.5H_2O$, mag. suscept. at low temps. 4=4393
$Cu(NO_3)_2$ vapour mols., configuration and dimensions, electron diffr. obs. 4=6590
$Cu_{0,65}NbS_2$, crystal structure, atomic comparison with NbS_2 and MoS_2 3=16078
Cu–Ni, control of entry into gaseous arc cloud 0=2344
Cu—Ni alloys, creep and lifetime under load, 700-1150°C 3=15996
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Cu–Ni alloys, diffusion coeff., rel. to composition 2=21059
Cn—Ni alloys, diffusion coeff., rel. to composition 3=6532
Cu—Ni, disordered, residual elec. resist., quantum theory 4=4109
Cu—Ni, elastic constants 1=1289
Cu—Ni, elastic consts., from u.s. velo., wedge method 3=23276
Cu–Ni, electronic magnetism, n.m.r. study 1=20259
Cu—Ni alloys, f.c.c., stacking faults 3=8442
Cu—Ni, ferromagnetic resonance 1=9047
Cu—Ni films, spin wave resonance, meas. 1=14768
Cu–Ni films, submicroporosity, effect of annealing and loading 3=23510
Cu–Ni, fine structure investigation 0=6380
Cu–Ni, heats of formation, 640°C 0=16343
Cu–Ni, inter-diffusion at large temperature gradients 1=7599
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    Fe–Al, short-range order, rel. to elec. resist. 1=19828
    Fe–Al, rel. to temp. 2=17003
    Fe_3Al alloys, work hardened, structural condition stability 1=1433
    Fe_3Al, antiphase boundaries in superlattice 1=20595
    Fe_3Al superlattice 3=16102
    $Fe_{13}Al_3$, mag. data 2=16902
    Fe–3.8% Au solid solution, Guinier–Preston zones 3=8882
    Fe–C submicron whiskers 3=23412
    Fe–Co, atomic ordering, by neutron diffr. 3=13506
    Fe–Co–V alloy 1=6523
    Fe–Co–V, ordering, elec. cond. 4=1992
    Fe–Co–V, structure 2=21532-3

Crystal structure, atomic—contd
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  Fe–Cr, neutron irrad. 0=1917
  Fe–Cr, short-range order, high-temp. annealing 1=11580
  Fe–Cr, σ-phase defect substructures 2=23200
  FeCr, short-range order, elec. resist. 1=14354
  Fe_3Cr, ordering, effect on antiferromagnetic props. 2=16925, 18924
  Fe–Cr–C, austenite–martensite transform. 3=18346
  Fe–Cu solid solns., metastable 4=22988
  Fe–Ga 1=6528
  Fe_3Ga 1=5099
  $Fe_{70}Ga_{30}$ 1=5099
  FeGaGe 1=5098
  Fe–Ge 1=14682
  Fe–Ge alloys, β-phase 4=29118
  Fe–Ge alloys, meas. and theory 3=11030
  FeGe 4=7621
  Fe_2Ge 2=4215
  Fe–Mn, neutron irrad. 0=1917
  α-Fe–Mo, clustering 1=4070
  Fe–Mo, components migration, in d.c. field 1=12655
  Fe–Mo, Mo migration in d.c. field 1=12656
  FeMo 3=13492
  Fe–Ni 2=23864
  Fe–Ni, f.c.c., lattice parameters of two structures 3=20114
  Fe–Ni, Fe_3Ni superstructure 3=8897
  Fe–Ni, 50/50%, ordering by neutron bomb. 2=6830
  Fe–Ni films, new phase 0=14013
  Fe–Ni, Invar type, effect of third alloying element rel. to ΔE effect 4=23166
  Fe–Ni, neutron irrad. 0=1917
  Fe–Ni–Cr–Ti system, χ-phase 3=3314
  Fe–Ni–Mo, γ solid soln., rel. to Mo content 4=17737
  Fe–P 0=18348
  Fe–Pt, ordering, effect on exchange interaction 0=10105
  Fe–Rh alloy 4=26314
  Fe–Rh, lattice constant change on antiferro–ferromag. transition 1=9145
  Fe–Ru system, phase diagram, structures 0=6385
  Fe_7Se_8 superstructure 1=20596
  Fe–Si 0=3272
  Fe–Si, orientation meas. from etch pits 3=8873
  Fe–Si, rel. to temp. 2=17003
  Fe–Si, up to 1200°C, rel. to Si content 3=10602
  $FeTiO_3$–αFe_2O_3, rel. to ferrimag. props. 1=11455
  Fe–V(0.92 wt.%), α, γ phases, temp. var. 4=26653
  Fe–W, neutron irrad. 0=1917
  Fe–W, W migration, in d.c. field 1=12655
  Fe–Zn alloys 4=26654
  Fe–Zn, ζ-phase 2=15046
  GaAs–GaP alloys 4=4546
  GaAs–Ga_2Se_3 solid solutions 1=19877
  Ga–Mn 1=6528
  GaP–GaAs, solid solutions 2=10921
  GaSb–Ga_2X_3 (X = Se, Te), for solid soln. range determ. 4=28997
  Ga–Zr 1=6528
  Gd intermetallic binary cpds. 2=15042-43
  Gd–Fe 2=4437
  Gd–Fe, Co or Mg system compounds 4=4605
  Gd–Mn, intermediate phases 2=12925
  Gd–transition elements 0=11823
  Ge–Cu solid soln., anomalous transmission rel. to precipitation distortions 4=2084
  Ge–Ni solid soln., anomalous transmission rel. to precipitation distortions 4=2084
  GeTe–PbTe 2=17055
  GeTe–SnTe 2=17055
  Hf–Al–Si system 2=17045
  Hf–Be cpds 2=4436
  HfC–TiC, ZrC, NbC, TaC solid solns., composition var. 4=25902
  HfC–UC solid solns. at 2000°C 3=25759
  $Hf_5(In_{0.5}Sb_{0.5})_3$, lattice parameters 3=25725
  Hf–O 4=7471
  Hf–Re 1=15088
  Hg[Cd]Te–$In_2[Ga_2]Te_3$, solid solutions 3=11301
  Hg–Sn, constitution diagram 3=13504
  $HgTl_4Br_6$–$HgTl_4I_6$ 4=23458
  $HoCo_5$ 3=8682

Crystal structure, atomic—contd
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  Ho–Mn, intermediate phases 2=12925
  InAs–InP, solid solns. 2=4467
  In-Sb(70 wt %), simple cubic 4=4609
  In–Sb–Te 0=9978
  In_2Te_3 solid solns. with $A^{ii}B^{vi}$ tellurides, lattice parameters 1=20621
  IrSb 0=14016
  Ir_2Si 1=5099
  Ir_3Si 1=5099
  Ir_3Si_2 1=5099
  $LaCu_2$, as AlB_2 3=20874
  La_2Mg_{17} 4=2081
  Li_2MgPb, by n diffr. 4=4610
  Li-Zn-Al system 4=23452
  Mg solid solns., lattice spacings 0=21195
  Mg–Cd, ordered 3=23479
  Mg–Ce cpds 2=21529
  Mg–In, h.c.p., local order, X-ray diffuse scatt. study 3=25744
  Mg–Mn, chill-cast, rel. to comp. 4=20694
  Mg(Mn,Cd), Cu(Ni), Zn(Ga,In,Ge), ternary Laves phases 3=16091
  Mg–Nd cpds 2=21529
  Mg_2 Sn, rel. to 23·8 MeV Mössbauer absorption line 4=12592
  Mg–Zr, chill-cast, rel. to comp. 4=20694
  Mn–Ag, lattice distortion of Mn 2=23863
  Mn–Al, Cu substituted, effect of Cu content 3=25529
  MnAl 1=5099
  Mn–Al–Cu, ferromagnetic phase 1=20064
  Mn–Al–Fe system 1=14689
  Mn–Au, lattice distortion of Mn 2=23863
  $Mn_xCo_{80-x}C_{20}$ 0=3010
  Mn–Cu, lattice distortion of Mn 2=23863
  Mn–Ga, ϵ phase, lattice consts., by X-ray diffr. 3=15900
  Mn–Ga (38%), ζ phase 4=4363
  Mn–Ge, mag. props., four phases 1=20043
  Mn–Si–B system, intermediate phases 0=18359
  MnTe, high temp., fictitious transforms. 3=23469
  $Mn^{2+}_{(1+x)}$ $Ti^{3+}_{2(1-x)}$ Ti^{4+}_x O_4 solid solns., $0.5 \leqslant x \leqslant 1$, cell size 4=4384
  Mn–Zn, ζ-phase 2=15046
  $MoAl_4$ 1=5099
  $MoAl_5$ 1=5099
  $MoAl_{12}$ 4=7627
  $Mo(Al, P)_2$, lattice parameters 3=25725
  MoB rel. to similar types 3=18338
  Mo–Be 4=17811
  Mo–Ni, δ phase 3=25743
  Mo–Re, polygonization 2=23197
  Mo–Tc system, superconducting phases 3=19113
  Mo–Ti, β–α transformation, habit planes and orientation 0=16312
  $NaMg_{12}$ 4=2081
  Nb-base binary alloys, rel. to conc. 4=17813
  NbB rel. to similar types 3=18338
  $NbCr_2$, rel. to temp. and Ni content 3=5119
  Nb–Ni of W_6Fe_7 type 3=16093
  Nb–Re alloy, χ phase 4=10542
  Nb–Rh [Ir, Pd, Pt], intermediate phases, structure 4=23280
  Nb–Sn, β–W phase, var. Nb_3Sn 4=26661
  $NbTc_3$ 1=11881
  Nd–Al 2=4437
  Nd–Fe system compound 4=4605
  Ni-base alloys, K state and binding forces 3=5114
  Ni binary alloys, short-range order effects, residual resistance 1=15128
  NiAl, electron distrib., X-ray meas. 3=16092
  Ni_3Al, influence of Cr, Ti, Mo and W additions 4=23459
  Ni-B system, two new Ni_4B_3 phases 0=18346
  Ni–Be, aged, orientations of new phases 3=16099
  Ni–Be, changes at early ageing state 3=13507
  Ni–Cd system 4=16291
  Ni, with Cr, Ti, W, Mo, Nb, Co and Al 2=21531
  Ni–Cr films, vacuum deposited, rel. to annealing temp. 4=26562
  Ni–Cr ordering, by neutron diffr. 4=2000
  Ni–Cr, short-range order, room temp.-600°C 4=1998
  Ni–Cr–Al 2=21531
  Ni–Cr–Ti–Al 2=21531
  Ni–Cr–Ti–Al, fine structure changes, aging 2=8854
  Ni–Cu, from elasticity data 0=728

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- **alloys**—contd
  - Ni—Fe films, grown by epitaxy 1=12664
  - Ni_3Fe, long range order, entropy 0=16346
  - $Ni_{10}Hf_7$, intermediate phases 2=21528
  - Ni_2In type, rel. to NiAs type 2=6833
  - Ni_3Mn, mag. structure rel. to order 3=18080
  - Ni_3Mn, ordering, effect on antiferromag. props. 2=16925, 18925
  - Ni_3Mn ordering temp. and mag. moment 3=20623
  - Ni—Nb, lattice parameters meas. up to 8 at. % Nb 4=7221
  - Ni—P solid solutions, acid deposited 3=20875
  - Ni—P solid solutions, acid deposited, changes on heating 3=20876
  - Ni_3Pt, short-range order 4=1999
  - Ni_3Pt, short-range order, characteristic X-ray diffraction temp. 1=4066
  - Ni-Se, heated to 600°C, electron diffrn. study 3=25788
  - Ni-Ta 4=26273
  - Ni—Ti, supersaturated, decomposition 1=15133
  - Ni—Ti—Cr, supersaturated, decomposition 1=15133
  - $Ni_{10}Zr_7$, intermediate phases 2=21528
  - Os—As or Sb—S, Se or Te 4=26056
  - Os—B system 1=10260
  - Os-B, orthorhombic phase 2=23866
  - Os-Ir, rel. to occurrence in minerals 2=2397
  - $PbBi_4Te_7$, second superlattice structure 3=13508
  - $Pb(FeTa)_{0.5}O_3-PbTiO_3$ system, rel. to ferroelec. props. 2=12567
  - $Pb(FeTa)_{0.5}O_3-PbZrO_3$ system, rel. to ferroelec. props. 2=12567
  - Pb in Mg solid solutions, lattice parameters, zone overlap 0=16315
  - $PbSe-Bi_2Se_3$ system 3=25742
  - PbTe-SnTe 2=17055
  - $PbTiO_3-PbNb_2O_6$, solid solutions 2=14951
  - $PbTiO_3-PbZrO_3$, solid-solution single crystals 2=14951
  - $PbTiO_3-SrTiO_3-$"$Bi_{2/3}TiO_3$", solid solutions 2=14632
  - Pd, binary, meas. and band model 3=1126
  - Pd, effect on transfer of matter in break contact 1=16294
  - Pd_3As 1=5099
  - Pd-Hg, solid solns., lattice parameters 2=4473
  - $Pd_{1.1}Mg_{0.9}$ 1=15077
  - Pd_3Mn_2, ξ-and μ-phases 4=23033
  - $PtCuZn_2$ 1=5098
  - Pt_3Fe, super lattice, range of stability 2=6832
  - Pt_3Fe, unit cell dimensions 3=25745
  - Pt_3Ga 1=5099
  - Pt_3Ga_7 1=5098
  - Pt_4Ga 1=5099
  - Pt_5Ga_3 1=5099
  - Pt_2Ge_3 1=5098
  - Pt_3Ge 1=5099
  - Pt_2Si 1=5099
  - Pt_3Si 1=5099
  - δ- and ε-Pu alloys 4=29129
  - Pu—Al(5%) dilation at 100°K not in 8% Al 4=26668
  - Pu—C, < 50 at % C, temp. var., 500-1500°C, and phase diagram 4=7508
  - Pu_3Co 4=4620
  - Pu-Eu mixed oxide system, and phase transformations 4=7605
  - PuNi rel. to similar types 3=18338
  - Pu_5Si_3 4=26669
  - Pu-U system 0=8276
  - $ReAl_{12}$ 4=7627
  - Re-Mo, 2 σ-phase, atomic order, from powder photographs and X-ray diffr. 3=25752
  - Rh-Fe 3=3320
  - RhSe 1=5098
  - RhSi 1=5099
  - Rh_5Si_3 1=5099
  - $Rh_{58}Si_{42}$ 1=5099
  - Ru—As or Sb—S, Se or Te 4=26056
  - Ru-B, orthorhombic phase 2=23866
  - Ru-B system 1=10260
  - Sb—Ir 1=15123
  - Sb—Rh 1=15123
  - Sb, with Ru and Os 1=4049
  - Sb-Te, solid solubility rel. to composition 3=3343
  - Sc—Sb 4=2072
  - Sc—Y system 4=5443
  - Sc—Zr system 4=5443

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- **alloys**—contd
  - Si ternary Laves phase, reduced atomic radius 4=7645
  - Si—Fe, deformed, substructures and recrystallization 3=23468
  - Si—Fe alloy, rel. to magnetostriction curves 4=20551
  - 3% Si—Fe, recrystallization texture 1=1423-4
  - Sn-Cd axial ratios, effect of Al impurity 4=10556
  - Sn-Cd lattice spacing composition, lack of anomalies 4=7646
  - Sn—In, lattice spacing composition, lack of anomalies 4=7646
  - Sn—In (≤ 5 at %), linear composition var. 4=23493
  - Sn—Mg, new metastable phase 1=1453
  - Sn—Zr 1=6528
  - $SrBi_3$, superconducting 2=10905
  - $SrZn_2$, unit all and symmetry group 4=13602
  - TaB rel. to similar types 3=18338
  - Ta—Ni of W_6Fe_7 type 3=16093
  - Ta—Rh [Ir, Pd, Pt], intermediate phases, structure 4=23280
  - Ta-Rh, rel. to constitution diagram 4=15744
  - $TcAl_{12}$ 4=7627
  - Te—Se 0=12077
  - ThAl rel. to similar types 3=18338
  - $ThAl_2-ThMu_2$ system, relation bet. AlB_2 struct. and Laves phases 4=17820
  - Th-Ce, low-temp. lattice parameters 4=15796
  - Th—Ce—Al system 1=15124
  - ThCo, rel. to similar types 3=18338
  - ThIr 2=15053
  - Th_3Pd_5 3=20878
  - Th_3Pt_5 3=20878
  - ThX (X = Pt, Rh, Co, Ru, Ir), X-ray powder patterns 3=11279
  - $ThRh_2$ 2=15053
  - ThRu 2=15053
  - Th—Y alloys, lattice spacings 1=20578
  - Th—Zr, lattice spacings after quenching 2=4475
  - Ti, ω-alloy phases 0=16310
  - Ti alloys, ω-phase 2=4440
  - Ti-base, lattice stability, b.c.c. ⇌ h.c.p. reaction 0=15800
  - Ti—Al, three phases meas. 3=13502
  - TiAl 1=20465
  - Ti-Al-Si system 2=17045
  - $TiAu_2$—Au system 2=17031
  - Ti_3Au, V_3Au, V_3Pt change from Cr_3Si to Cu_3Au struct. by O, N or C impurities 4=13606
  - Ti—Cr, effect of heat treatment 3=20879
  - $TiFe_2-ZrFe_2$ 3=20880
  - Ti—Mo solid solutions, short-range order 1=20617
  - Ti—Ni system 4=23295
  - Ti—Rh, effect on superconductivity crit. temp. 3=7407
  - Ti_3Se_4 3=1346
  - Ti_3Te_4 3=1346
  - TiI rel. to similar types 3=18338
  - U base solid solns., decomposition 2=21555
  - UAl_2 2=15051
  - U—Eu mixed oxide system, and phase transformations 4=7604
  - UFe_2 2=15051
  - U—Fe—C system, existence of $UFeC_2$ 2=12923
  - U—Mo—Nb, up to 30 at. % Mo, 40 at. % Nb 4=13610
  - U—Nb(0.3-17.3 at. %), metastable phases, quenching rate effects 4=13609
  - αU—Pu, lattice consts. at room temp. 3=25733
  - U-Pu, solid soln. 2=19087
  - U_2Ru, unit cell 2=4444
  - $USi_{1.67}$ $USi_{1.88}$ and USi_2 1=15089
  - V binary and ternary alloys 4=13612
  - α' (VAl) 0=3226
  - V_3Au, V_3Pt, Ti_3Au change from Cr_3Si to Cu_3Au struct. by O, N or C impurities 4=13606
  - V-H system 2=12922
  - VMn, ordered structure of CsCl type 4=13613
  - V—Mo—C 2=17034
  - V_3Se_4 3=1346
  - WB rel. to similar types 3=18338
  - W—Be 4=17811
  - WO bronzes 3=25390
  - Y—Al 2=4437
  - YBi 4=2094
  - YCo_5 3=8682
  - Y—Mn, intermediate phases 2=12925

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alloys—contd
YSb 4=2094
YSi rel. to similar types 3=18338
$ZnIn_2Se_4$ 3=25350
$ZnIn_2Te_4$ 3=25350
ZnS—CdS 1=1111
Zn–Sb phase diagram det. 0=6379
ZnSb–CdSb 0=16327
ZnSb–CdSb, pseudo-binary section 3=1348
Zr-based alloys, ω-phase 1=4062
ZrAl 2=15047
$ZrAl_2$ 1=5099
Zr_3Al_2 0=10317
Zr–Al–Si system 2=17045
$ZrCo_2$—$ZrFe_2$ 3=20880
$ZrPd_2$ 1=5099
Zr_2Pd 1=5099
$ZrTc_6$ 1=11881
$Zr(V_xCO_{1-x})_2$, C14 Laves phase, Co, V distrib. 4=7651
$ZrZn_{22}$, ξ-phase 1=20546
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$A^{III}B^{V}$ cpds., solubility of components rel. to lattice parameter 4=28993
$A_2{}^{III}B_3{}^{VI}$ cpds., vacant site ordering 2=10868
ABO_4, where A is rare-earth, B is Nb or Ta 3=25726
$A_2B^{I}B^{II}O_6$ type, unit cells 3=16077
AX_2 type ionic crystals 1=1385
adamantine cpds., deriv. using hexagonal nets 3=6847
alkali earth cpds. MgO structure, disruption by neutrons 2=12479
alkali halide phosphors 3=23100
alkali halide solid solns., lattice consts., calc. 2=19024
alkali halides, Fourier matrix 1=4962
alkali halides, h.p. polymorphs, lattice energies and parameters 4=15786
alkali halides, impurity ions, lattice distortion theory 4=4040
alkali halides, lattice distortion round impurity ions 4=26446
alkali hexafluorophosphates, dynamic, n.m.r. study 4=2067
alkaline earth oxide cathodes, rel. to emission 4=10524
allevardite 1=15098
aluminates, Al–O, tetrahedral distance 3=25715
amblygonite $[LiAlPO_4(OH, F)]$ 0=4649
amphiboles, crystal chemistry 0=8147
anapaite 1=15105
andalusite, Fe^{3+} ion isomorphism, by e.s.r. 3=20855
anhydrite ($CaSO_4$), redetermination 3=25717
astrakhanite by weighted phase projected methods 0=14034
austenite, at low temps. 4=13579
b.c.c. hydrides, crystallog. requirements and configurational entropy 4=22447
bafertisite $BaFe_2TiO[Si_2O_7](OH_2)_2$ 4=7607
baotite 1=15102
beryl, use of radioisotopes in study 0=21191
beryllia, phase transformation, 2080°C 2=14924
beryllides, unit-cell volumes, rel. to components 3=23446
borates 1=12568
borax, n.m.r. data 3=15963
calcite, rel. to structure amplitudes 4=23427-8
calcite, by X-ray methods 4=23427-8
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cementite 3=23447
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chabazites, rel. to ion diffusion 3=6534
chlorides of divalent metals, anhydrous 4=4616
chlorite, correction 3=8860
chlorite, reported departure from ideal structure, discussion 0=6362
chrysotile 0=18365
corundum whiskers, real, by electron micr. 4=26646
cronstedtite, polymorphism 3=8854
cubic diamond-type, rel. to covalent bonds 3=10618
curite, ($3PbO.8UO_3.5H_2O$), by Patterson and Fourier synthesis 4=7615
daltonides, calc. from elec. props. 3=10762
danburite, from Bi^{11} n.q.r. coupling 4=20628
datolite 0=14030
diamond structure, stability under pressure 2=14873
diamond, surfaces, clean 3=11312
dickite, graphical anal. of diffraction patterns 0=18340

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inorganic compounds—contd
dolerophanite, $Cu_2O(SO_4)$ 3=25718
dumontite 3=16086
epistilbite, mordenite chain modification 4=23440
fergusonite, natural and polymorph. mod. 1=15107
ferrites, hexagonal structures related to $Ba_2Zn_2Fe_{12}O_{22}$ 3=23458
ferrites, oxygen parameter in spinel structure 1=12640
ferrites, Verneuil grown 0=6327
ferroelectrics, complex ABO_3 type 2=16777
ferroelectrics, with laminar structure 2=17026
ferromagnet, spin waves rel. to structure 2=4211
ferromagnetic ceramics, topotactically oriented 0=6336
ferromagnetics, rel. to periodic domain structure 0=3033
films, AB_2 form, X-ray meas. 4=2065
gadolinite 0=14030
garnets 3=15867
garnets containing Sb^{5+} 4=13233
garnets containing V^{5+} 4=13234
garnets, ferrimagnetic, domain structure 0=13676
garnets, silicate ion impurity 0=2941
garnets, synthetic, 23 new compositions 0=8226
glass, titaniferons, coord. state, spectral data, 3=25459
glasses, by electron diffr. 2=17025
glasses, phosphate, two and three-component 3=8602
graphite, lattice distortions, X-ray study 0=1911
graphitic oxide, oxygen atoms distrib. 3=5107
green iron rust 1=4048
hambergite, $Be_2BO_3.OH$, redeterm. and birefrigence calc. 4=4598
hematite, triaxial anisotropy in basal plane 4=13191
herderite 0=14030
hollandite 0=6364
hydration H_2O mols., H-bonded, angles 2=15038
"hydrobiotites", layer sequences 3=20858
hydrosodalite, unit cell and space group 3=23461
ice 0=8206, 16652
ice III 0=16319
ice-I, bent hydrogen model 1=20543
ice, dense forms, i.r. study 0=6178
ice, glacier and deformed 0=21155
ice, H position, i.r. and Raman spectra 0=10044
ice, at low temp. 1=6518
ice at low temperatures, by electron diffraction 0=18337
ice, low-temp. forms 1=7868
ice, O atom separation elongation on isotopic exchange, rel. to temp. 4=10536
ice, from sorbed water on silica gel 0=18354
ice, surface 3=21307
ice, vitreous—cubic—hexagonal transitions 1=10228
intermetallic cpds, single-map technique 4=23377
intermetallic cpds, 39, data 2=17016
intermetallic cpds. of transition elements, interatomic distances, calc. as atomic radii sum 4=23488
jachimovite, $CuH_2(UO_2.SiO_4)_2.5H_2O$ 4=7614
kaolinite, graphical anal. of diffraction patterns 0=18340
kaolinite, heat treatment effects 0=4666
kaolinite by X-ray study 1=10264-5
kettnerite 1=9139
kosolite, $PbO.UO_3.SiO_2.H_2O$ 4=7622
lanthanide—Ni cpds. 4=28776
lattice constituents in compound crystals, symbols and definitions 4=10494
Lawsonite, false symmetry 1=11570
layer structures with mixed layers, Fourier analysis 2=2383
leonite $K_2Mg(SO_4)_2.4H_2O$ 0=18363
lomonosovite—murmanite group minerals 3=18325
lorandite ($TlAsS_2$) 0=3236
lovozerite, from electron-density pattern 1=4057
magnetic crystals classes, property tensors 2=10636
magnetoplumbite structure, cation sites, charge compensation effects 3=18222
manganites, transformation with temp. 2=14923
margarite 0=3234
martensite, at low temps. 4=13579
metaboric acid, cubic form 1=11569
M^{2+} borates 4=15787
$M'_2M''_3(NO_3)_{12}.24H_2O$ 1=6260
metatorbernite 0=8227

Crystal structure, atomic — contd
inorganic compounds — contd
mica, position of K ion 0=18362
micas, diffr. props. rel. to diagnostic props. 3=13482
micas, polymorphism theory 3=13482
minerals, heteropolar, distorted co-ordination polyhedra, rel. to Pauling's rule 2=12919
minerals, by n. m. r. 4=10522
mordanite (Ptilolite) 4=26674
mordenite-type, 6 possible structures 3=20856
muscovite, electron diffr. study 1=15104
muscovite, vibrations of OH ions 3=13164
narsarsukite 1=15103
normal valence cpds., crystal chemistry, new classification 0=3219
orpiment, rel. to As^{75} nuc. quadrupole res. 4=23079
orthite, and composition 1=15101
orthophosphates, $ABPO_4$ (A=Ca, Sr, or Ba; B=Li, Na, or K) 2=8578
oxide semiconductors, complex cpds. 1=19883-4
oxide semiconductors, complex cpds. 2=8370-1
oxides, $AB_{0.5}B'_{0.5}O_3$, of perovskite type 1=20548
oxides and intermetallic cpds., superstructures in simple cubic lattice 0=13990
paracelsian 1=15106
patronite 4=26677
perovskite ($BaSr_{0:33}Nb_{0.67}O_3$) type 4=4619
perovskite ferroelectric solid solutions, atomic displacements 4=10239
perovskite-like new compounds 4=29140
perovskite structure, ordering of cation position 2=8145
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sapphire, precise lattice constants 2=15014
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spinels, cation distribution 0=3073
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spinels, degree of inversion 2=12918
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stishovite (SiO_2), X-ray meas. 3=5108
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transition-metal monosilicides 2=6809
transition-metal niobates and tantalates 2=6814
transition metal oxides 4=7603
transition metal phosphides, binary 3=13453
transition metal silicides, ternary G and E, and germanides 4=7602
transition metal sulphides, groups IV, V, VI, review 3=23449
tridymite 1=15090
Tutton salts, $K_2Zn(SO_4)_2.6H_2O$ and $K_2Mg(SO_4)_2.6H_2O$, n.m.r. data 3=8740
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vaterite ($CaCO_3$), lattice consts., from X-ray and optical data 3=25727
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    yoderite 2=17024
    zeunerite and meta-zeunerite 1=9137
    zinc-blende structure, stability under pressure 2=14873
    zinc-blende and wurtzite structures, valance band splittings 2=10350
    zunyite 0=4651-2
    $AgAsS_2$, Patterson synthesis 4=15792
    AgBr emulsions, tabular grains, lattice rotations 2=602
    AgBr, substructure 1=15073
    $Ag_2C_2N_2O_2$, crystal structure 3=13478
    Ag_3Ca_5 2=10883
    AgCl, with internal print-out, Ag precipitates 0=6343
    AgCl, lattice const., effect of strong u. v. illumination 4=4622
    AgCl, to 100 kbar 2=8811
    AgCl, X-ray determ. 4=20765
    $AgFeO_2$ 4=15793
    $AgFeTe_2$ 4=10071
    Ag fulminate 0=3238
    Ag halides, mixed ternary, phase equil. 2=10895
    Ag halides, Ni^{2+} dosed 3=6654
    AgI, hexagonal 3=5102
    AgI, hexagonal 3=18310
    AgI, hexagonal 4=17817
    AgI, high pressure, X-ray powder camera 2=23834
    β-AgI, weight factor for refl. analysis 4=10447
    $Ag_{0.5}La_{0.5}Fe_{12}O_{19}$ 4=1844
    AgN_3, unit cell dimensions 3=11265
    $AgNO_2$, re-determination 2=10893
    AgO, neutron diffraction results 1=20537
    Ag_2O, new modification with layered structure 4=10551
    Ag_2O, 2° -80°K, rel. to specific heat 3=769
    $(Ag_{x/2}Pb_{(1-x)}Bi_{x/2})Te$ 0=4646
    $AgSbS_2$, miargyrite 4=23474
    Ag_3SbS_3 4=26152
    $AgSbTe_2$ 0=7860
    $AgSbTe_2$, striated microstructure 0=21202
    Ag_2Se 1=6186
    Ag_2Se 4=1622
    Ag_2Se films 0=16363
    $AgTcO_4$ 2=23854
    Ag_2Te 4=1622
    AlAs, electron density distrib. 2=12911
    Al ortho-arsenate, new modification 0=3235
    AlB_{10} 4=2069
    AlB_{12}, α and β phases 0=6356
    AlB_{12}, Harker sections applic. 0=13997
    Al_4C_3, X-ray diffr. pattern 3=23445
    Al carbonitrides 3=18320
    Al_2CO, short range superstructure 1=4052
    $Al_2Ca_3(SiO_4)_3$, neutron diffn. analysis 4=29092
    $AlCl_3$ 0=14006
    Al_4Mo 4=23417
    Al-Mo, lattice parameters rel. to Mo content 4=15722
    $AlNbO_4$, lattice constants and 42 X-ray powder lines 4=13580
    Al oxides 1=11563
    AlO_2, α, cell constants, rel. to n-irrad. 4=28620
    α-Al_2O_3, density and lattice parameters 9=14008
    Al_2O_3, derived from Al hydroxides 4=30844
    Al_2O_3, films 2=10937
    Al_2O_3, rel. to methods of prep. 1=6517
    Al_2O_3. 3CaO. $6H_2O$, H atom position by n.m.r. 4=29093
    Al_2O_3. 3CaO. $6H_2O$, position of H atoms 4=4594
    Al_2O_3-Cr_2O_3 mixtures, X-ray meas. 2=15022
    Al_2O_3 - Cr_2O_3 system, lattice spacings 1=20539
    Al trihydroxide 2=15033
    $13Al_2O_3.Na_2O.8SeO_3.xH_2O$ ($x \cong 73$) 3=13468
    13 $Al_2O_3.6SO_3.$ xH_2O ($x \cong 79$) 3=13469
    1.71 $Al_2O_3.SiO_2$, mullite, statistical model 3=20857
    Al_4O_4C 3=11268
    Al_4O_4C, X-ray diffr. pattern 3=23445
    AlP, bond length and order rel. to electron transfer 3=20044
    $AlPO_4$ 4=10523
    Al (36.5-99.92 at.%)—Rh, lattice spacings 3=18339
    AlSb, electron density distrib. 2=23843
    AlSb, films, on glass, electron diffraction study 0=16320
    AlSb, at high pr. 3=11211

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  inorganic compounds—contd
    $AlTO_3$, (T = Y, Eu, Gd. Tb, Dy, Ho, Er), hexagonal structure 4=2068
    Al-V, lattice parameters rel. to V content 4=15722
    Al-W, lattice parameters rel. to Wcontent 4=15722
    As chalcogenides 4=2135
    $As(CN)_3$ 3=8849
    AsI_3 0=686
    $AsI_3.3S_8$ 0=686
    10 As_2O_5. 90 Nb_2O_5, tetragonal phase 4=26666
    10 As_2O_5. 90 Ta_2O_5 tetragonal phase 4=26666
    As_2Se_3, amorphous, films 3=13461
    As_2Se_3, short-range order 3=10802
    As_2Se_3, unit cell, space group 3=18364
    As_2Se_3—As_2Te_3, low-temp. 3=18364
    As_2Te_3 3=13456
    As_2Te_3 3=18364
    As_2Te_3, amorphous, films 3=13461
    $AuCu_3$, analysis by Fourier transformation 1=11567
    $Au_{0.82}Hg_{0.18}$, rel. to at. %Hg 2=4435
    Au—In—Cu, h. c. p. ζ-phase, lattice spacings rel. to electron conc. 4=7618
    AuMn, neutron diffr. study 2=10683
    Au_2Mn 0=720
    Au_3Mn tetragonal and orthorhombic phases 4=13590
    Au-Mn-In, transformation with composition 2=10682
    AuSn 4=7619
    B borosilicate glass, radial distrib. 3=13483
    BF_3. $2H_2O$ 4=23423
    B_2H_6, at low temp., and products of r.f. discharge 0=1914
    B_9H_{15}, refinement 1=20550
    $B_{18}H_{22}$ 3=19990
    $B_{18}H_{22}$, molecular structure 3=5109
    i-$B_{18}H_{22}$, by X-ray diffraction 4=4602
    $B_{20}H_{16}$ meas. 4=13583
    $B_9H_{13}(CH_3CN)$ 1=20549
    BN 1=20534
    BN, dense forms 3=11203
    B oxide glasses, n.m.r. data 0=8256
    B_7O 0=1906
    BP, bond length and order rel. to electron transfer 3=20044
    $B_{13}P_2$ 3=6844
    BPO_4 and $BAsO_4$, high pressure forms 0=3231
    $BaM^{II}_xM^{III}_{12-x}O_{19-x}F_x$, ($M^{III} = Al^{3+}$, Ga^{3+}, Fe^{3+}; $M^{II} = Ni^{2+}$, Co^{2+}, Cu^{2+}, Zn^{2+}) substitutions 3=1013
    $BaAl_2O_4$ 0=18356
    Ba borate glasses, X-ray study 3=11269
    Ba borate, vitreous, radial distrib. studies 0=14027
    Ba borates 4=15787
    $BaB_{0.5}Re_{0.5}O_3$ (B = Ca, Mg, Mn, Fe, Co, Zn, Cd) 1=14694
    $(Ba,Bi)FeO_3$ 3=3277
    $Ba_2Bi_4Ti_3O_{18}$, rel. to ferroelec. props. 2=12570
    $BaBr_2$ 4=7608
    $BaBr_2.H_2O$, by proton resonance 0=16190
    $Ba(Ca_{0.33}Ta_{0.67})O_3$ 4=4597
    $BaCl_2$ 4=7608
    $BaCl_2$. $2H_2O$, neutron diffn., meas. and calc. 4=29147
    $BaCl_2.2H_2O$, proton magnetic resonance 0=6281
    $BaCoO_2$ 0=8215
    $BaF_2.2FeO.5Fe_2O_3$, cell size 0=10181
    $BaGa_2O_4$ 0=18356
    $BaGeO_3$, high-temp. form 3=1300
    BaI_2 4=7608
    $BaLiPO_4$:Cu 2=8578
    $Ba(M,Ti)O_3$, hexagonal structure 1=15100
    Ba_2Mg_{17} 3=20837
    Ba_2Mg_{17} and Mg substitution solution on superlattice 3=20838
    $BaMnO_2$ 0=8215
    $BaMnO_3$, two forms 2=10889
    $BaNb_2O_6$—$CaNb_2O_6$ 1=4053
    $BaNb_2O_6$—$SrNb_2O_6$ 1=4053
    $BaNiO_2$, neutron diffn. analysis 4=29102
    $Ba(NiW)_{0.5}O_3$, phase transitions 3=8864
    $BaO.Fe_2O_3$ 1=14735
    2 BaO. 3 SiO_3 1=20551
    2BaO. $3SiO_3$ 2=8834
    2BaO:TiO_2:P_2O_5 phosphor 1=20561
    $Ba(OH)_2.8H_2O$ and Ba ion coordination 4=2071
    $(Ba, Pb)_{1-\delta}(Ti, Nb)O_3$ system 2=10898

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inorganic compounds—contd
(Ba, Pb) TiO$_3$, composition depend. 1=20504
Ba—Pu oxide systems 4=7606
BaPuO$_3$, perovskite-type 1=15097
BaSO$_4$, barite 3=13471
BaSO$_4$, graphical anal. of diffraction pattern 0=18339
BaSO$_4$, ionic structure, point charges concept 1=20400
BaS$_2$O$_6$.2H$_2$O 1=1400
Ba$_2$(Si$_2$O$_6$) 1=20551
Ba$_2$(Si$_2$O$_6$) 2=8834
BaSnO$_3$, γ-reson. absorption study, 78-1020° K 4=1350
(Ba$_{0.4}$ Sr$_{0.2}$,Ca$_{0.4}$) TiO$_3$ 4=10549
(Ba, Sr)Nb$_2$O$_6$, structure rel. to ferroelec. props. 0=8217
(Ba, Sr)TiO$_3$, lattice const. rel. to Sr content and ferroelec. props. 0=20957
BaTa$_2$O$_6$ 0=14035
Ba$_{0.5}$ TaO$_{3-x}$ 1=7870
BaTiO$_3$, cubic to tetragonal transition 3=6816
BaTiO$_3$, effect of MnO$_2$ doping 3=8560
BaTiO$_3$ grains, anomalous props. 4=23536
BaTiO$_3$, rel. to hydrostatic pressure up to 600 kg cm^{-2} 3=3302
BaTiO$_3$, rel. to hydrostatic pressure up to 600 kg cm^{-2} 3=6848
BaTiO$_3$, lattice parameters, electron optical study 4=29096
BaTiO$_3$, refinement 3=1331
BaTiO$_3$, surface layers, Schotky defects 0=4293
BaTiO$_3$, tetragonal 2=10888
BaTiO$_3$–BaSnO$_3$ 0=16018
BaTiO$_3$–BaSnO$_3$, lattice const. and phase diagram 0=16017
BaTiO$_3$–BaZrO$_3$ 0=16018
BaTiO$_3$–Sb$_2$O$_3$, variation of lattice parameter with Sb content 2=15034
BaTiO$_3$–SnO$_2$ 0=16018
BaTiO$_3$–ZrO$_2$ 0=16018
Ba$_2$TiO$_4$ 2=10887
BaTi$_4$O$_9$ 0=10312
BaTiS$_3$ 3=8850
BaZn Fe garnet, new hexagonal series 4=13581
BaZnO$_2$ 0=8215
Ba$_2$ZrAs$_2$O$_9$ 3=10982
Ba$_2$ZrP$_2$O$_9$ 3=10982
BaZrS$_3$ 3=8850
BeO 4=10525
BeO, c-axis, rot. of sub-crystal 3=2818
BeO, double Bragg scattering, rel. to neutron-irrad. 4=29097
BeO, high temp. polymorph 3=1320
Be oxide, lattice parameter, density 2=17019
BeO, and neutron diffusion, temp. var., review 4=19533
Be oxide, neutron irradiated 2=3972
BeO, neutron irrad. 3=18298
BeO, neutron irrad., lattice parameter changes 2=21516
Bi monochloride 2=8826
BiFeO$_3$ 1=5100
BiFeO$_3$ 1=10262
BiFeO$_3$, and ferroelec. and mag. props, temp. var., Neel point 4=22774
BiFeO$_3$, unit cell 1=15099
Bi$_3$NbTiO$_9$, rel. to ferroelectricity 2=17026
Bi oxides 1=11563
mixed Bi oxides with ferroelectric props. 1=7689
BiOCl, by electron diffr., and applicability of Blackman's calc. 4=4600
BiOCl, electron diffraction study 2=10819
BiOHCrO$_4$ 2=23865
Bi perovskites 2=6522
BiPt, rapid cooling effects 0=10847
β-Bi$_3$Rh 1=15087
Bi$_2$Se$_2$ and Bi$_2$Se$_3$, X-ray meas. 4=7609
Bi$_2$Te$_3$, expansion coeffs., structure-cell data 0=4632
Bi$_2$Te$_3$, unit cell angle, rel. to transport props. 4=30846
Bi$_8$Te$_7$S$_5$, orientations, electrolytic study 2=10890
Bi$_2$Te$_2$Se$_2$ 1=20552
Bi$_2$Te$_{3-x}$Se$_x$ solid soln. 3=13511
Bi$_4$Ti$_3$O$_{12}$, rel. to ferroelec. props. 2=12569
Bi$_4$Ti$_3$O$_{12}$ and its solid solns., rel. to ferroelectric props. 1=7692
Br hydrate, by X-ray diffr. 3=18312
Br$_3$B$_3$S$_3$ 0=14028

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inorganic compounds—contd
C$_8$ F$_{12}$ 4=29151
CS$_2$, from i. r. spectra and powder diffraction 4=10202
carbon disulphide, polymer chain formation rel. to Raman spectra 4=30691
CaB$_2$O$_4$ 3=13467
Ca [B(OH)$_4$]$_2$. 2H$_2$O 4=30848
Ca$_x$Ba$_{1-x}$TiO$_3$ 1=19930
CaBe$_{13}$ 2=10877
CaBi$_2$Nb$_2$O$_9$, rel. to ferroelectricity 2=17026
CaBi$_2$Ta$_2$O$_9$, rel. to ferroelectricity 2=17026
CaBr$_2$, using electron diffr. subsidiary maxima 0=4624
CaC$_2$ 3=1328
CaC$_2$, by neutron diffraction 2=4419
CaCO$_3$, effect of neutron irrad. 4=26564
CaCO$_3$, high-press. phases 4=30799
CaCO$_3$, to 100 kbar 2=8811
CaCO$_3$H$_2$O, and preparation 0=1907
CaC$_2$O$_4$. H$_2$O 0=6169
CaF$_2$, by graphical method 0=714
CaF$_2$, precision lattice const. 1=1677-8
CaF$_2$ with rare earth impurities, effect of heat treatment 1=1259
CaF$_2$, (200) X-ray refl. anomaly 2=10827
CaF$_2$, X-ray scattering, Compton effect 0=8195
CaF$_2$—Sb$_2$O$_3$ mixtures 1=9003
CaF$_2$–YF$_3$ crystalline solns. 4=6831
Ca$_8$(Fe$_{1-n}$Al$_n$)$_8$O$_{20}$ solid solutions, rel. to structure 3=1340
Ca$_4$Fe$_2^{2+}$Fe$_{18}^{3+}$O 1=14743
Ca$_4$Fe$_{14}$O$_{25}$ 1=14743
Ca ferrite containing Gd^{3+} 4=26359
Ca$_3$Fe$_2$ (Fe$_{1.5}$V$_{1.5}$)O$_{12}$ 4=4376
Ca$_3$Fe$_2$Sn$_3$O$_{12}$–Y$_3$Fe$_2$Fe$_3$O$_{12}$ 0=6359
Ca$_3$GeO$_5$ 3=23373
CaH$_2$ 2=10870
Ca halophosphate, Mn, Sb-activated 3=3038
CaI$_2$, crystallization, X-ray meas. 4=2065
CaMgB$_6$O$_{11}$.6H$_2$O = CaMg[B$_3$O$_4$(OH)$_3$]$_2$.3H$_2$O 3=8861
CaMg[B$_3$O$_4$(OH)$_3$]$_2$. 3H$_2$O, boracite 4=23429
CaMoO$_4$-rare earth niobate systems, rel. to composition 4=26644
Ca(NO$_3$)$_2$.4H$_2$O, unit cell, by X-ray diffr. 3=16084
CaO–Al$_2$O$_3$–Fe$_2$O$_3$, different phases 4=26643
2CaO. 3BeO 2=17020
Ca orthophosphates, hydrogen bonding, X-ray diffr. and i.r. data 3=8865
Ca phosphate, octa and hydroxyapatite, and growth 4=17807
CaPd$_3$O$_4$, poss. space groups 4=26645
CaPt[Pd](CN)$_4$. 5H$_2$O 4=29101
CaSO$_4$ 3=23453
Ca$_{1+x+y/2}$Sb$_2$O$_6$(O$'_x$ + F$_y$), X-ray study 4=4603
calcium selenate hydrate, isotype of gypsum 4=13585
Ca$_2$SiO$_4$, β-phase 4=23431
Ca$_3$SiO$_5$, different phases, room temp. to 1100°C 4=29100
CaSnO$_3$, γ-reson. absorption study, 78-1020° K 4=1350
Ca$_x$Sr$_{1-x}$TiO$_3$ 1=19930
Ca$_2$Ta$_8$O$_{22}$, from powder diffr. 4=2074
CaTiO$_3$, effect of neutron irrad. 4=26564
CaWO$_4$, neutron diffn. analysis 4=29102
CaWO$_4$, neutron diffraction refinement 4=10533
CaWO$_4$, X-ray diffraction refinement 4=10532
Ca$_2$Y$_2$[Si$_4$O$_{12}$] [CO$_3$]H$_2$O, kainosite, unit cell and space group 3=13473
CaZr(PO$_4$)$_3$, from X-ray diffr., powder 4=2073
CaZrS$_3$ 3=8850
CdBr$_2$, crystallization, X-ray meas. 4=2065
CdCl$_2$, crystallization, X-ray meas. 4=2065
CdF$_2$:Eu^{3+}, optical props. data 2=10588
CdI, polytype 28 Hc 4=13584
CdI$_2$, neutron diffr. meas., anomalies 4=29098
CdI$_2$, polytypism, rel. to crystal growth 2=10869
CdIn$_2$O$_4$ 0=3237
CdIn$_2$S$_4$, plus Cu 1=14501
Cd(NO$_3$)$_2$.4H$_2$O, unit cell and space group, by X-ray diffr. 3=16084
Cd oxides 1=11563
CdO containing In^{3+}, Ag$^+$ or Na$^+$, lattice parameter 1=20535
Cd$_4$(P,As)$_2$(Cl,Br,I)$_3$, five ternary semiconductors 4=1594
CdS, cubic modification, stability invest. 2=10864
CdS, excess Cd, effect of annealing 3=11262

Crystal structure, atomic—contd
inorganic compounds—contd
CdS films, vacuum-deposited 4=20805
CdS films, vapour-deposited, hexagonal, cubic phase prod. 4=29099
CdS, high-pressure 3=23443
CdS, high-pressure phase 3=20834
CdS, high pressure phase 4=10433
CdS, up to 90 k bars 4=4502
CdS, pure and Cl-doped, electron distributions, by X-ray diffr. 0=21193
CdS single crystals 1=10254
CdS, structure changes under pressure 4=15779
CdS, symmetry props. 0=11783
CdS–CdTe, single crystals 0=621
CdSb and ZnSb, similarity of structure 4=4142
$Cd_{1+x+y/2}Sb_2O_6(O'_x + F_y)$, X-ray study 4=4603
CdSe, A–B layer order 1=7867
CdSe, high-pressure phase 3=20834
CdSe, high pressure phase 4=10433
CdSe, structure changes under pressure 4=15779
Cd_2SiO_4 spinel 4=30797
CdTe 4=1622
CdTe films, sublimed under vacuum 2=21188, 23459
CdTe, high-pressure 3=23443
CdTe, high pressure phase 4=10433
CdTe layers sublimated onto alkali halide crystals, 4=10531
CdTe, monocrystalline films, on mica and NaCl 3=20944
CdTe–CdSe system, cubic and hexag. structures 4=23424
CdTe–PbTe System 4=23262
CeC_2 3=1328
Ce_2C_3 3=1328
CeC_2, by neutron diffraction 2=4419
Ce_2C_3, by neutron diffraction 2=4420
$Ce_{24}Co_{11}$ 3=8844
Ce_5Ge_3 3=8842
$Ce_2Mg_3(NO_3)_{12}.24H_2O$ 4=7611
Ce_2Ni_7 0=4638
$Ce_2Zn_3(NO_3)_{12}.24H_2O$ 1=6260
Co^{2+} site preference, effect of anion charge compensation 3=18222
$Co(AlCl_4)_2$ 3=1330
Co_3C, electron diffraction study 3=1324
Co_3C, electron diffraction study 3=1324
$Co_2(CO)_8$ 1=11573
$Co_2(CO)_8$ 4=23436
$CoCl_2.2H_2O$ refinement, bond lengths 4=7612
$CoCl_2.2H_2O$, proton structure 3=20853
$CoCl_2.6H_2O$, orientation of H_2O molecules 3=1201
$CoCl_2.6H_2O$, two-dimensional Patterson and Fourier synthesis 0=4639
$CoCl_2.6H_2O$, by X-ray single-crystal method 1=11568
CoF_2, temp. var., and thermal expansion 4=9863
$CoFe_2O_4$ ferrite films 4=23586
CoFe garnet, magnetostrictive displacement of O ions 4=13246
$Co[Hg(SeCN)_4]$ 3=16083
Co–Mn mixed oxides, tetragonalization of spinel structure 0=8216
Co_7Mo_6, μ-phase 2=15045
$CoMoO_4$ 3=5110
Co oxides 1=11563
CoO, with mixed hexogonal–cubic stacking 2=19076
CoO, structure and temperature factors 4=10534
Co_2P 0=18360
CoPt, crystal struct., neutron diffn. meas., comp. with X-ray diffn. 4=28804
CoS_2, S–S distance 0=16322
Co_9S_8 3=8840
$CoSO_4$, antiferromag. structure 2=6679
$CoSO_4$, β, by n diffr., and mag. structure, 4.2.°K 4=1852
$CoSO_4.H_2O$ 3=18327
$CoSO_4.6H_2O$ 3=8851
$CoSb_2$ 3=13518
Co-Si-B system at 1000°C 0=18359
$CoTiO_3$ 4=13586
Co uranate 3=3320
$CoV_2O_4-Co_2VO_4$ 0=4366
Cr^{3+} ions in glasses, solutions and crystals absorption bands 0=10041
$CrBO_3$, calcite structure, X-ray evidence 4=29105
$CrBr_2$ 2=15025

Crystal structure, atomic — contd
inorganic compounds — contd
Cr_3C_2, neutron diffraction study 1=2534
$CrCl_2$ 0=10184
$CrCl_2$ 2=15023
$CrCl_3$, by X-ray diffraction and n.q.r. 4=17808
CrF_2 0=10184
Cr_2F_5 4=23433
CrH, "hexagonal Cr", by neutron diffr. 4=2076
CrI_2 2=10871
CrN, antiferromagnetic structure, by neutron diffr. 0=6248
CrO, powder pattern 3=23369
CrO_2, anomalous temp. dependence 1=15079
CrO_2, X-ray magnetic studies 2=12689
Cr_2O_3, magnetic exchange interactions 2=6681
Cr_2O_3 and $Al_2O_3-Cr_2O_3$ system, lattice spacings 1=20539
$Cr^{3+}-Rh^{3+}$ ternary oxides, isomorphism 2=4425
$CrS({}_{1\rightarrow 1\ 2})$ 1=11250
$Cr_2(SO_4)_3.nH_2O$, hydration study 1=17897
CrSe, mag. structure 1=9042
Cr_3X_4(X = S, Se, Te), and antiferromagnetism 4=13267
Cr_3Se_4 1=15078
Cr_3Se_4 2=12662
Cr_3Se_4 3=3320
Cr_7Se_8 1=15078
$CrVO_4$, antiferromag. structure 2=6679
$CrVO_4$, high-pressure form, rutile 3=11270
Cs–Bi cpds 1=15142
Cs borates, cation distrib. 0=4645
$CsBeF_3$ 3=20847
Cs_3Bi, comparison with $CsBi_2$ 0=14011
$CsCdCl_3$ 4=23425
Cs_2CdCl_4 4=23425
CsCl, modifications I and II 4=23257
Cs_3CoCl_5, least-squares refinement 4=23426
$Cs_2Co(SO_4)_2.6H_2O$ 4=23435
Cs halides, NaCl and CsCl structure 1=6516
$CsMnF_3$ 2=19078
CsPb trihalides, perovskite type 0=4637
$CsPbI_3$ 0=4636
Cs_4PbX_6, X = Cl, Br, I 0=16328
CsSb, rel. to photoemission 1=16382
Cs_3Sb 1=15081
Cs uranyl nitrate 2=4423
$Cu_2[A^{IV}B_3^{VI}]$ type, semiconducting materials, crystal structure 3=13513
$CuAu_3$, lattice parameter study of degree of order 0=16342
$Cu_2B_{10}H_{10}$, X-ray study 3=3303
$Cu(C_5H_5N)_2Br_2$ 1=9138
$CuCl_4^{2-}$ 4=28682
Cu_2Cl_2 azomethane complex 0=4641
cuprous chloride spinel, a_0 = 8·265A 3=1326
$CuCl_2.3Cu(OH)_2$, electron diffraction study 0=14031
$CuF_2.2H_2O$ 2=2389-90
Cu ferrite, effect of O content 2=826
$CuFe_2O_4$, influence of Mn_3O_4 on cubic spinel structure 1=15094
Cu ferrite-chromite transition temp. 0=1807
$CuFeS_2$ 3=1027
$CuFe_2S_3$ 3=11049
Cu_5FeS_4, two polymorphic forms 4=23438
γ—CuI 3=20835
CuI, films, hexag. modification 1=20536
$[Cu(IO_6)_2]^7$ complex 2=824
$CuIO_3(OH)$, salesite 3=1338
Cu–Mn ferrite, effect of O content 2=826
Cu–Mn ferrite, saturation magnetization 1=20131
$CuMn_2.aCr_aO_4$, with $0 \leqslant a \leqslant 2$ 1=20553
$CuMnO_2$, crednerite 0=12050
$CuMn_2O_4$, cation disposition, inversion 3=20846
$Cu_xMn_{3-x}O_4$, tetragonal distortion rel. to composition 4=15555
$Cu(NH_4)_2Cl_4.2H_2O$, meas. by e.s.r. 4=10319
$Cu(NH_4)_2(C_2O_4)_2.2H_2O$ 2=23857
$Cu(NH_3)_4(NO_3)_2$ 1=9140
$Cu(NH_3)_4PtCl_4$ 1=4056
$Cu[NH_4(SO_4)]_2.2H_2O$ 2=4429
$Cu[NH_4(SO_4)]_2.6H_2O$ 2=4429
$Cu[NH_4)SO_4]_2.6H_2O$, change of structure transition at 67°C 1=14936

Crystal structure, atomic—contd
inorganic compounds—contd
[illegible] NiS_2, comparison with NbS_2 and MoS_2 3=16078
Cu oxides 1=11563
CuO by neutron diffraction 3=126
Cu_2O films, on Cu 1=20540
$(CuO)_x(Mn_2O_3)_{1-x}$ 3=8521
$Cu_2O-Nb_2O_5$ 2=8859
Cu_2OSO_4 [illegible]
$Cu_2O-V_2O_5$ [illegible]
$Cu_2PO_4(OH)_3$, cornetite, Monte Carlo method 4=30947
$Cu_5(PO_4)_2(OH)_4$, pseudomalachite 3=8307
Cu and Pt phthalocyanates, electron microscope observation [illegible]
Cu_2S, high chalcocite 3=23448
Cu_2S, tetragonal 4=15788
$CuSO_4$, anhydrous, Cu–O bonds 2=8833
$CuSO_4$, neutron diffn. analysis 4=29102
$CuSO_4.H_2O$ [illegible]
$CuSO_4.5H_2O$, inequivalent Cu sites 2=6282
$CuSO_4.5H_2O$, water molecule 2=4430
$Cu_4(SO_4)(OH)_6$, antlerite 3=8866
[illegible]
[illegible] 4=10515
CuSe, klockmannite, superlattice reflections in X-ray photographs 0=10313
$CuSeO_4.5H_2O$, inequivalent Cu sites 2=6282
Cu–Te films 4=30880
$CuTeO_3.2H_2O$ (teineite), correction of chem. formula 2=15080
Cu_2TiX, CsCl-type structure 3=1344
Cu_2ZrAl, CsCl-type structure 3=1344
Cu_2ZrZn, CsCl-type structure 3=1344
$DCrO_2$, O–O bonds by neutron diffraction 3=1334
$DyAl_2$ 4=23442
Dy_3Al_2 4=23442
Dy_5Ge_3 4=23442
Dy_2O_3, neutron diffraction determ. 4=10535
ErB_4 0=14020
EuB_6 0=14012
Eu bromate, Eu^{+++} lattice symmetry 0=647
Eu bromate, Zeeman effect study of Eu^3 0=648
$EuCO_3$, by powder diffr. method 4=26647
Eu_3O_4 3=5104
EuS, rel. to mag. props. 3=11050
$EuSO_4$, by powder diffr. method 4=26647
EuSe, rel. to mag. props. 3=11050
Eu_2SrO_4 3=5104
EuTe, rel. to mag. props. 3=11050
Fe compounds, rel. to Fe^{5+} Mössbauer effect 2=10304
$FeBr_2$, powder, 400°C 3=25710
Fe carbides, precipitated from α-iron solid solutions 0=16325
Fe_3C, C atom position, by neutron diffraction 4=10537
Fe_3C, by electron diffr. 3=20867
θ- Fe_3C, electron diffraction study 3=1324
Fe_3C, interplanar spacings, tables 3=13455
Fe_3C, lattice size, and ferromag. and Curie temp. 4=26322
F_3C, in steel, electron diffraction study 0=4625
ε-$Fe_{2-3}C$, electron diffraction study 3=1324
χ-$Fe_{2-3}C$, electron diffraction study 3=1324
α-Fe, interstitial C, X-ray scatt. det. 1=20574
$Fe(CO)_5$ 4=23447
$Fe_xCd_{1-x}Cr_2S_4$ 4=29115
$FeCl_2 4H_2O$ 0=4643
$FeCl_2$, antiferromag., neutron diffr. study 2=18927
Fe chromium boride 4=26651
$FeCr_2S_4$, space gp., structure, mag. prop. meas. 4=29116
$Fe_2Fe_4(PO_4)_4(OH)_4$ 0=3230
$Fe_{0.9}Ga_{0.1}BO_3$ 4=2092
$Fe_{0.23}Mg_{1.77}Al_4(PO)_4(OH)_4$ 0=3230
$Fe_{1.53}Mg_{0.47}Al_4(PO_4)_4(OH)_4$ 0=3230
Fe–Mn ferrite, cation distribution 1=2484
$(Fe,Mn)(Nb,Ta)_2O_6$, morphological analysis 1=11571
Fe_2MoC 4=17809
Fe_2MoC 4=26652
Fe_4N, electron diffraction study 0=14014
Fe_4N, mag. structure, Mössbauer study 2=10299
α″-$Fe_{16}N_2$, in steel, electron diffraction study 0=4625
β- $FeNaO_2$, and weak ferromagnetism 4=13267
β–$FeNaO_2$, X-ray and neutron diffraction studies 4=1853
FeNiN, $Fe_{4-x}Ni_xN$ 1=20554

Crystal structure, atomic—contd
inorganic compounds—contd
$(Fe, Ni)_4N$, Mössbauer study 2=10299
Fe oxides 1=11563
FeO (wüstite), defects, neutron diffr. study 0=20790
FeO (wüstite), superstructure 4=2078
Fe_2O_3, α-phase magnetic exchange interactions 2=6681
Fe_2O_3, γ→α transition with pressure 0=18376
α-Fe_2O_3 (haematite), effect of heat treatment 0=8209
Fe_2O_3, structure parameters 0=4650
Fe_3O_4 0=18344
Fe_3O_4 ferrite films 4=23586
Fe_3O_4, magnetic, electron diffr. study 3=1148
Fe_3O_7, ferrimagnetic structure 2=8659, 10876
βFeOOH, colloidal 3=18408
β - FeOOH, by electron diffraction 3=1333
β-ferric oxyhydroxide and green rust 0=21198
Fe_2P 0=18360
FeRh 2=12662
FeS_x, (1 < x < 1.08) 0=4484
FeS_2 1=20451
FeS_2, S–S distance 0=16322
FeS_2, structural parameters 0=4650
$FeSO_4$, anhydrous 0=3233
$FeSO_4$, antiferromag. structure 2=6679
$FeSO_4$, powder data, unit cell and space groups 0=18357
$FeSO_4.H_2O$ 3=18327
$FeSO_4.4H_2O$ 2=21524
$FeSO_4.7H_2O$ 4=29117
$FeSO_4.7H_2O$, using Mo Kα radiation 3=6850
Fe_7Se_8, crystal struct. neutron diffn. meas. 4=28816
FeSi, neutron diffrn. study 3=25543
Fe–Si–B system, intermediate phases 0=18359
$FeSiO_4$, neutron diffn. analysis 4=29102
F spinel ferrites, charge compensated 4=13229
$FeTe_x$ (x = 0.8, 0.95, 1.10-1.15), ordering of excess Fe 1=12531
$FeTiO_3$–αFe_2O_3, rel. to ferrimag. props. 3=3133
$FeVO_4$, high-pressure form, using orthorhombic unit cell 3=11270
Fe–Y–La garnet 4=26679
Ga arsenides, lattice periods, effect of surplus Ga or As 3=20836
GaAs 1=11594
GaAs, bond length and order rel. to electron transfer 3=20044
GaAs, change of melting 2=21918
GaAs, change on melting 3=5448
GaAs doped with Se, Te, Zn and Cd 4=26045
GaAs, electron density distribution 1=12638
GaAs leaf-like flakes 2=4414
GaAs, major faces, growth axis 3=13404
GaAs, precise lattice constants 2=15014
GaAs, single crystal polarity 0=721
$Ga_{2-x}Fe_xO_3$ 1=15092
β-Ga_2O_3 0=16321
$Ga_2O_3.Fe_2O_3$ 2=23852
$3Ga_2O_3.4SO_3.9H_2O$ 3=13470
αGa_2S_3 3=25711
Ga_2S_3, α-phase 2=10872
GaSb 1=11594
GaSb 4=4606
GaSb, bond length and order rel. to electron transfer 3=20044
GaSb, electronic density distribution 1=11560
GaSb, at high pr. 3=11211
Ga–Te system 4=23444
$GaTe_3$ 1=15134
Ga_2Te_3, superlattice ordered vacancies 4=20759
Gd–ceric earth mixed garnets 3=3125
Gd garnet, effect of substitution of Fe by Sc 4=7650
Gd_3Al_2 4=23442
$Gd_3Al_3Fe_2O_{12}$, ionic distrib. 1=20562
$GdCoO_3$ 4=26649
GdFe garnet, Nd-substituted 1=12542
Gd_5Ge_3 4=23442
Gd_6Mn_{23} 4=23443
$Gd_3Mn_2Ge_2GaO_{12}$ and related garnets 0=3095
GdNi, rel. to mag. props. 4=30854
$GdRu_2$ 4=4605
Ge films, rel. to evaporation paramaters 3=20926
Ge, surfaces, cleaved (111) 3=11312
$GeAs_2$ 2=10873

Crystal structure, atomic — contd
inorganic compounds — contd
$GeCrLiO_4$ 2=12916
$Ge_{0.2}Cu_{1.2}Fe_{1.6}O_4$, 2 phases, 430° and 510°C, Mössbauer study 4=7620
$Ge_3Li_2CoO_8$ spinel 3=5112
$Ge_3Li_2ZnO_8$ spinel 3=5112
$GeNi_2O_4$, and antiferromagnetism 4=13267
GeO_2, quartz form 4=23445
10 Ge_2O_5. 90 Nb_2O_5, tetragonal phase 4=26666
10 Ge_2O_5. 90 Ta_2O_5 tetragonal phase 4=26666
$GeRhLiO_4$ 2=12916
$GeRhLiO_4$ spinel 3=13479
$GeZnBaO_4$ 4=23473
HBO_2,γ and β forms 3=13465-6
HBO_2, −130°C 4=13582
$HCrO_2$, $DCrO_2$, by neutron diffraction 4=7613
$HCrO_2$, O−H−O bonds, by neutron diffraction 3=1334
HF 4=7137
$H_3Na_3KCu(IO_6)_2$. 14 H_2O 2=825
H_2O molecule in solid hydrated compounds 1=4055
H_2O_2 1=3843
H_2S 3=1325
$HfCr_2$ 4=30850
Hf hydrides, pile-irradiated 0=14015
HfI_4 0=18358
HfO_2 0=3225
$HfRe_2$ 1=15088
Hf_5Re_{24} 1=15088
HfSn 4=26650
$HgI_2(TlI)_4$, from X-ray diffr. powder 4=2082
HgS, high pressure phase 4=10433
$HgSO_4.H_2O$, refinement, and H bonding 4=26658
HgSe, high-pressure phase 3=3253
HgSe, high pressure phase 4=10433
HgTe, high pressure phase 4=10433
Hg_3TeO_6 4=4613
$HgTl_4Br_6$ 4=23458
Ho compounds 2=8828
$HoAl_2$ 4=23240
HoD_3, neutron diffn. comparison with X-ray diffn. 4=29112
H_2S, solid, rel. to phases 4=20706
$IAlCl_6$ 0=4642
IF_7, mol. symmetry 2=19077
IF_7, orthohombic form 3=8843
$ISbCl_8$ 0=4642
In arsenides, lattice periods, effect of surplus In or As 3=20836
InAs 1=11594
InAs, bond length and order rel. to electron transfer 3=20044
InAs, change on melting 2=21918
InAs, change on melting 3=5448
InAs, electron density distrib. 1=7865
InAs, at high pr. 3=11211
InAs-based quaternary systems 0=10327
InAs−In_2Se_3 system, lattice const. 4=1611
$InFeO_3$ 2=4424
InP, at high pr. 3=11211
InP, X-ray reflection intensities from {111} planes 1=11565
In_2S_3, β-phase, space group 2=10874
InSb 1=11594
InSb 4=4606
InSb, bond length and order rel. to electron transfer 3=20044
InSb, electron density distrib. 3=11260
InSb, at high pr. 3=11211
InSb, high-pressure phase 3=20834
InSb, high-pressure phase, exptl. confirmation 3=13516
InSb, lattice const. changes rel. to pressure, review 4=12895
InSb, metallic form 3=13517
InSb, polarity effects in p−n junction fabrication 2=12538
InSb surfaces cleaned by bombardment and annealing 1=1447
InSb, InSbSn, $InSbSn_2$, $InSbSn_4$, metallic forms. 4=29114
InSb-based quaternary systems 0=10327
InSe, amorphous, short-range order meas. 3=13515
InSe, from electron diffraction data 0=12042
InSe, rhombohedral 3=13459
In_2Se_3, electron diffraction examination 1=12662
In_2Se_3, high-temp. form 1=15085
In_2Se_3, low-temp. form 2=2391

Crystal structure, atomic — contd
inorganic compounds — contd
InTe, metallic form 4=29114
InTe (II), metallic 4=10428
InTe (II), metallic 4=10429
InTe−PbTe system 4=23262
$IrAs_3$ 2=10875
$IrSb_2$ 3=13518
$IrSb_3$ 2=10875
K pentaborate 0=4644
K pentaborate, α-phase, unit cell 0=6360
$KB_5O_8.4H_2O$ 3=13477
$K_2B_4O_7 \cdot 4H_2O$ 3=25724
β−K_3Bi 3=20841
KBr, lattice parameter, rel. to Pb impurity content 4=6895
$KC(CN)_3$ 4=20761
KCN, low-temp. phase 2=15004-5
KCN, neutron diffr, study 2=10891
KCN, thermal transformations at ~ -110°C under temp. cycling 0=21196
KCl, electron density distributions 1=15072
KCl, Fourier coefficients and potentials, calc. 2=4417
KCl, to 100 kbar 2=8811
KCl, single crystal laminae 2=10795
KCl:Co, coord. of Co from spectrum, absorpt. 4=26186
$KClO_3$, single crystal laminae 2=10795
$K_3Co(CN)_6$. Cr, polytypism, Cr^{3+} e. s. r. data 0=13877
$KCoF_3$ 3=1332
$KCoF_3$, electron distribution 1=20559
$KCoF_3$, above and below Néel temp. 1=15095
$K_2Co(SO_4)_2 . 6H_2O$ 4=23435
$K_2Cr_2O_7$, electron-diffraction study 4=30853
$K_2Cr_2O_7$, space group symmetry 0=722
$KCuCl_3$ 3=18314
$KCuF_3$ 1=12642
$KCuF_3$, above and below Néel temp. 1=15095
KD_2PO_4, lattice constants 3=17943
KF. $4H_2O$ 4=29130
$K_3Fe(CN)_6$ 1=20224
$K_4Fe(CN)_6.3H_2O$ 4=20622
$K_4[Fe(CN)_6].3H_2O$, ferroelectric 1=1136
$K_4Fe(CN)_6.3H_2O$ ferroelectric 1=20274
$K_4Fe(CN)_6.3H_2O$, by n.m.r. and X-rays 4=20622
$KFeF_3$ 3=1332
$KFeF_3$, electron distribution 1=20559
$KFeF_3$, above and below Néel temp. 1=15095
KGe 0=8212
$KHC_4H_4O_6$, unit cells and space groups 0=14037
$KHCO_3$, neutron diffn. study of H_2-atom posn. 4=29132
KHF_2, neutron diffraction data refinement, FHF geometry 4=10545
KH_2F_3, geometry of $H_2F_3^-$ ions 3=8847
KH_2PO_4, rel. to ferroelec. Curie point 2=8462
$KHSO_4$ 4=23464
$KHSeO_4$ 1=9141
$(KHSiO_3)_4$ 4=7637
$K_4(HSiO_4)_4$ 4=26670
$KHgBr_3.H_2O$, X-ray diffr. study 3=18315
KI, high pressure, X-ray powder camera 2=23834
$KICl_4.H_2O$, refinement 3=13476
$KI.Hg(CN)_2$ 3=8855
$KI.Hg(CN)_2$, erratum 4=7636
$(K_{0.8},La[Bi]_{0.4})\,Nb_2O_6$ 4=10549
$KLiSO_4$, meas. of thermal expansion 0=18361
$KMnCl_3$, from e.p.r. compared with $KMnF_3$ 4=1881
$KMnF_3$ 3=1332
$KMnF_3$, electron distribution 1=20559
$KMnF_3$, lattice parameter variation with sample preparation 1=1247
$KMnF_4$, rel. to mag. transitions 1=2464
$KMnF_3$ above and below Néel temp. 1=15095
KXF_3, X = Mn, Fe, Co, Ni or Cu 1=2536
K_2MnO_4 0=8220
$K_2MoO_3F_4 . H_2O$ 4=7635
$K_2[NH(SO_3)_2]$ 3=25723
KNO_3, electron distribution deformation of K^+ ion 1=15071
KNO_3, rel. to ferroelec. props. 2=4092
KNO_3, parent crystal, critical dimension 2=4373
$K_2Na(SO_4)_2$, meas. of thermal expansion 0=18361
K_2NbF_7, neutron diffn., meas. and calc. 4=29147
K_2NbO_3F 3=3306

Crystal structure, atomic—contd
- **inorganic compounds**—contd
  - $KNiF_3$ 3=1332
  - $KNiF_3$,above and below Néeltemp 1=15095
  - $KNiF_3$, electron distribution 1=20559
  - KO_2, model for O atom movement 2=15027
  - KO_3, by X-ray powder diffr. 3=16071
  - KOH, new data 0=21201
  - $K_2O.2Ta_2O_5$ 4=23465
  - $(KPO_3)_x$ 2=17023
  - $(KPO_3)_x$, by generalized Patterson function 3=18323
  - K_2PtCl_4, lattice spacing by electron micr. 4=15784
  - K_2ReH_9, H-atom arrangement in ReH_9^{2-} ion neutron—X-ray diffn. comp. 4=29133
  - K_2SO_4, 20–600° 2=10892
  - $K_2S_2O_8.\frac{1}{4}H_2O$, unit cell and space group 0=16331
  - K_3Sb 1=15081
  - potassium fluorosilicate fused melt, equilibrium reactions 1=20722
  - K_2SnBr_6, cubic phase 4=23463
  - K_2TiCl_6 1=10263
  - $KTiNbO_5$ 4=23466
  - KTi_3NbO_9 4=23466
  - K_3VS_4 4=20762
  - $K_2W_2O_{11}.4H_2O$ 4=29134
  - $KZnCl_3.2H_2O$ 4=2087
  - K_2ZnO_2 4=17818
  - $LaAlO_3$, Ga^{3+} e.s.r. data 3=11112
  - LaC_2 3=1328
  - LaC_2, by neutron diffraction 2=4419
  - La_2C_3 3=1328
  - La_2C_3, by neutron diffraction 2=4420
  - La_3Co by single crystal methods 1=20544
  - $La_2Co_3(NO_3)_{12}24H_2O$, from mag. susceptibility 3=8867
  - LaF_3 4=22478
  - LaF_3, from Gd^{3+} electron spin reson. 0=6263
  - $LaFe_{1-A}X_AO_3$, changes rel. to mag. props. 4=30720
  - La_5Ge_3 3=8842
  - La hydrides 2=6812
  - La_2O_3, and thermal expansion, 20-1050°C 4=17372
  - $LaTe_2$ 4=4240
  - $LiAl_5O_8$, distortion, determ. from Li^7 and Al^{27} n.m.r. 4=17696
  - $LiAlPO_4F$, amblygonite, superposition anal. 0=14033
  - $LiBC_2$ 4=23451
  - Li_2C_2, unit cell, space group, X-ray diffrn. 3=6843
  - $LiCrGeO_4$, tetrahedral coord. of Li 3=13175
  - $LiCrO_4$ powder, X-ray photos 4=29119
  - $Li_3CrV_2O_8$, spinel type, Cr and Li distrib. 4=13593
  - Li-Cu-Al system 4=23452
  - $LiCuCl_2.2H_2O$ 0=12047
  - $LiCuCl_3.2H_2O$ 3=25719
  - $LiCuCl_3.2H_2O$ 4=7301
  - $LiEuO_2$ 4=4611
  - LiF crystals, lattice expansion on neutron irrad. 4=10539
  - LiF, effect of neutron irradiation 2=15020
  - LiF films, electron diffr., negative surface tension effect 0=21182
  - LiF, lattice parameter changes, rel. to cold working 3=8838
  - LiF, lattice parameter temp. depend. 1=12376
  - lithium ferrite-aluminate, cation distrib. 4=15651
  - lithium ferrite-gallate, cation distrib. 4=15651
  - $LiGa_5O_8$ 4=2080
  - $Li_{15}Ge_4$ 1=15082
  - LiH, electron diffraction of films, nature of chemical bond 0=14017
  - LiH, lattice parameter, press var., calc. 4=10432
  - LiH, X-ray and neutron diffr. study 2=15021
  - LiH_2PO_3, unit cell 4=7625
  - $LiH_3(SeO_3)_2$, ferroelectric 0=14032
  - Li hydrazinium sulphate, and ferroelec. 4=20420
  - LiI 0=7874
  - $LiK_2P_3O_9.H_2O$ 3=8858
  - $LiMnPO_4$, refinement 0=8219
  - $LiNbO_3$, by powder neutron diffr. 3=23454
  - Li oxalate, rel. to C—C bond electron density 4=4595
  - Li_2SO_4, H_2O 3=16070
  - $Li_2ZnCl_4.2H_2O$ 4=13594
  - LuC_2 3=1328
  - LuC_2, by neutron diffraction 2=4419

Crystal structure, atomic—contd
- **inorganic compounds**—contd
  - MgAl ferrites 1=20440
  - MgAl ferrites, prep. and props. of monocrystals 2=4381
  - Mg_2Al_3 2=23850
  - $MgAl_2O_4$, Al^{3+} and Mg^{2+} distrib., from Al^{27} nuclear quadrupole interaction 1=1286
  - $MgAl_2O_4$, cation distrib., neutron diffn. analysis 4=29121
  - $Mg[B_3O_3(OH)_5].5H_2O$ 2=12917, 19082
  - $MgBe_{13}$ 2=10877
  - $Mg(CH_3COO)_2.4H_2O$ 0=3258
  - $Mg(D_{0.9}H_{0.1})_2$ 3=13457
  - MgF_2 thin layers 4=29122
  - Mg ferrite, nonstoichiometric, cation distribution 3=25720
  - Mg ferrite, nonstoichiometric, cation distrib., erratum 4=17810
  - Mg ferrite-magnetite, mag. cryst. anisotropy 2=12789
  - MGa_2O_4, with M = Mn, Ni, Co or Zn 1=15093
  - $Mg(Ga_{2-x}Mn_x)O_4$, cation distrib., by X-ray dispersion, anomalous 3=13486
  - $MgGa_2O_4$ spinel 2=16984
  - $Mg_2Ge_xSi_{1-x}$, 250°-600° K, meas. 3=13142
  - $MgMn_2O_4$ 1=20134
  - $Mg_xMn_{3-x}O_4$, tetragonal distortion rel. to composition 4=15555
  - $MgMn_2O_4$—$MgAl_2O_4$, tetragonal—cubic spinel transformation 1=20556
  - $Mg(NO_3)_2.6H_2O$ 2=4428
  - MgNi ferrites, cation distributions 1=6520
  - MgO, crystallite size, rel. to heat of solution 0=7010
  - MgO microstructure, rel. to periclase formation, impurities effect 4=30869
  - $MgSO_4.H_2O$ 3=18327
  - $MgSO_3.3H_2O$ 4=13595
  - $MgSO_4.4H_2O$ 2=21524
  - $MgSO_4.6H_2O$ 4=13596
  - $MgS_2O_3.6H_2O$ 3=25721
  - MgV_2O_4–Mg_2VO_4 0=4366
  - MgZn ferrite 3=23184
  - MnAlGe, rel. to ferromag. props. 2=735
  - MnAs, above 40°C 4=10540
  - MnAs, between 40° and 120°C, X-ray study 2=2387
  - MnB_2 0=8210
  - $MnCr_{2-t}Al_tO_4$ 0=1777
  - $Mn_{4-x}M_xN$, (M=Cr, Fe, Ni), lattice constants 0=671
  - $MnCr_2O_4$, mag. structure, neutron diffr. data 3=11101
  - $Mn_xCr_{1-x}O_2$, lattice parameters rel. to composition 1=11431
  - $Mn_{2-x}Cr_xSb$, X-ray study 3=13282
  - MnF_2, temp. var., and thermal expansion 4=9863
  - $MnFe_{2-t}Cr_tO_4$, by neutron diffraction, down to 4.2°K 0=1797
  - Mn ferrite, lattice constants variations 3=3304
  - Mn ferrite solid solutions, effects of oxidation 2=4232
  - $Mn_{1.03}Fe_{1.97}O_4$, crystal structure 3=13463
  - $MnFe_2O_{4+x}$, cations distrib. in spinel lattice 0=3239
  - $MnFe_2O_4$, distorted $Mn^{3+}O_6^{2-}$ octahedra 2=21520
  - $Mn_xFe_{3-x}O_{4+\gamma}$ spinels, lattice consts. 4=10541
  - $Mn_{2.35}Ge$, rel. to antiferromag. props. 1=1249
  - Mn_5Ge_3, by neutron diffr. 4=4364
  - Mn_2Hg_5 2=10878
  - $Mn_3Li_2ZnO_8$ 4=26656
  - MnMg ferrites 1=20441
  - MnMg ferrites 2=4382
  - Mn_4N 0=11850
  - Mn_4N-type cpds., mag. structure 2=8603
  - MnO 2=17017
  - MnO, distortion, and antiferromagnetism 4=13271
  - MnO–CuO–CoO–O_2, composition depend. 0=2900
  - Mn dioxides, γ 4=26657
  - MnO_2, γ—β transform. 3=23376
  - MnO_2, MnF_2, at antiferromagnetic Curie temp. 1=20545
  - α-Mn_2O_3, neutron diffraction determ. 4=10535
  - Mn_3O_4, change assoc. with ferrimag. transition search 4=2906
  - Mn_3O_4—$MgAl_2O_4$, tetragonal—cubic spinel transformation 1=20556
  - Mn_3O_4, O positional parameters 1=12639
  - Mn(III) trioxides of heavy lanthanides and Y 3=25722
  - MnOOH, hydrogen position detm. by neutron diffraction 3=1335

Crystal structure, atomic—contd
inorganic compounds—contd
Mn_2P 0=18360
Mn_2Pd_3 ordered alloy 4=13598
MnS_2, structure parameters 0=4650
$MnSO_4.H_2O$ 3=18327
$MnSO_4.4H_2O$, from proton mag. resonance study 4=23456
Mn_2Sb, Cr—modified, ferrimag. to antiferromag. transition, neutron diffr. study 1=1242
$Mn_{1+x+y/2}Sb_2O_6(O'_x + F_y)$, X-ray study 4=4603
$MnTiO_3$, antiferromagnetic 0=21200
Mn uranate 3=3320
$MnYO_3$, and weak ferromagnetism 4=13267
MnZn ferrite, electron diffr. crystallography 2=21525
Mn–Zn ferrites, grain structure 0=3075
$MoBe_{22}$ 3=20839
$MoBr_3$ 4=17812
Mo_2C, neutron-diffraction determ. 3=11264
$Mo_{2.08}C$ 1=5096
$MoCl_3$ 3=13464
MoN, two hexagonal forms 2=4416
Mo_2N, cubic phases, electron diffraction study 0=12043
Mo oxides 1=11563
Mo oxides, 500-870°C 0=18345
MoO_2—MoO_3 system phases 4=7631
MoO_3, lattice spacing by electron micr. 4=15784
MoO_3, least-squares refinement of structure 4=4614
Mo_nO_{3n-m+1} homologous series based on MoO_3 4=7629
Mo_4O_{11}, monoclinic and orthorhombic 4=4615
Mo_5O_{14}, 2-dimensional disorder 4=7628
Mo_8O_{23} least-squares refinement of structure 4=7630
$Mo_{18}O_{52}$ 4=7629
MoS_2, 5 synthesized specimens. 2=4422
MoS_2, rhombohedral 3=13459
$MoSe_2$ 4=7626
$Mo(Si_{0.9}Be_{0.1})_2$ 4=10638
$MoTe_2$ 2=8831
deuteroammonia, by neutron diffraction 1=20541
ND_4 salts, rel. to deuteron magnetic resonance 2=6708
NH_3, ND_3 1=20555
NH_3 and ND_3, at low temps. 0=4634
$NH_2—NH_3^+BF_4^-$, crystal struct. by Weissenberg camera 4=29113
$NH_2—NH_3^+BF_4^-$, by Weissenberg camera 4=29113
NH_2SO_3H (sulphamic acid) 0=8228
$NH_3.H_2O$, at –95 and –160°C 0=4633
NH_4BeF_3 3=20847
$(NH_4)_2BeF_4$ 3=16082
NH_4Br 1=19724
NH_4Br, H atom positions, electron diffraction determ. 4=30845
NH_4Br, modifications II and III, X-ray meas. 4=23419
NH_4CNS 0=4411
NH_4Cl, H positions, electron diffraction study 0=21189
NH_4Cl, I ⇌ II transitions, X-ray study 3=6810
NH_4ClO_2, at –35°C 0=4635
NH_4ClO_3 3=8852
NH_4ClO_4, NH_4 ion orientation 3=8857
$(NH_4)_2Co(SO_4)_2.6H_2O$ 4=23435
$(NH_4)_2CrO_4$ meas. 4=23420
NH_4CuCl_3 3=18314
NH_4 bifluoride, NH_4^+ electron distribution 1=20547
NH_4HF_2, electron density distrib. 0=8205
NH_4 halide phosphors 3=23100
(NH_4) $M(SO_4)_2.6H_2O$ [M = Mg, Zn, Ni, Co], rel. to Raman spectra 2=6585
$(NH_4)_2Mn_2(SeO_4)_3$, Fe K_α radiation study 4=30843
NH_4NO_3, molecular rotation 1=1401
NH_4NO_3, order–disorder transformations, thermal 2=6762
NH_4NO_3, tetragonal, hindered rotation of NO_3 groups 0=21190
NH_4 oxamate, rel. to C—C bond electron density 4=4595
$(NH_4)_4P_4O_{12}$ 4=23418
$(NH_4)_2SeO_4$ meas. 4=23420
$(NH_4)_2VO(NCS)_4.5H_2O$, anomalous X-ray scatt. obs. 4=29109
$(NH_4)_2WS_4$ 3=25716
N_2O, disorder confirmed by neutron diffraction 2=4358
N_2O_4, unstable monoclinic form 4=4618
$(NO_2^+)_2.S_3O_{10}^{2-}$ 4=26663
NSe 2=17018
$Na(AlSi_2O_6).H_2O$ 4=23477
$8NaAlSi_5O_2.3HO_2$ 4=26674
$Na_2Al_2Si_3O_{10}.2H_2O$, H atom positions 4=10552
$Na_2Al_2Si_3O_{10}.2H_2O$, (natrolite) 4=13603

Crystal structure, atomic—contd
inorganic compounds—contd
$NaBO_2$ 3=18322
$NaBO_2$ glass, rel. to B coord. number changes 2=8870
Na tetraborate hydrates, n.m.r. study 3=8739
$NaB(OH)_4.2H_2O$ 4=7641
$NaBePO_4$ (beryllonite) 2=12914, 17021
$NaBePO_4$, beryllonite 3=13472
$(Na_{0.5}Bi_{0.5})TiO_3$ 3=20851
$NaBr.2H_2O$, and proton structure 3=6851-2
$NaBr.2H_2O$ 4=23478
NaBr:Co, NaCl:Co coord. of Co from spectrum, absorpt. 4=26186
$NaBrO_3$, absolute configuration, rel. to optical rotatory power 4=23479
Na_2CO_3, extra one-dimensional periodicity 4=23480
$Na_2CO_3.10H_2O$ 4=23481
$Na_2CO_3.10H_2O$, $Na_2CO_3.7H_2O$, by X-ray diffr. 3=20854
$Na_2CO_3.NaHCO_3.2H_2O$, proton positions by n.m.r. 3=8859
$NaCd_2$ 2=23850
$NaCd_2$ 4=23377
Na_2CdO_2 4=17818
NaCl(rocksalt), Ba and Cl displacements, effect of temp. 0=14018
NaCl, cleavage surface behaviour 0=3188
NaCl, correction for temp. diffuse scatt. 2=17009
NaCl, electron distribution deformation of Cl^- ion 1=15071
NaCl, electron density distributions 1=15072
NaCl, electron density distrib. in ions 0=18351
NaCl, films, electron diffr. study 2=15091
NaCl, at 4000 kg/cm² 1=5094
NaCl, lattice structure in slip band, effect of annealing 1=1330
NaCl, mosaic patterns 0=20845
NaCl, to 100 kbar 2=8811
NaCl single crystals, surface structure 1=10278
NaCl, structure amplitudes, high $(\sin \Theta)/\lambda$ 3=13454
NaCl, structure amplitudes, powder method 0=18350
NaCl, X-ray diffr. and transmission, var. with temp. 4=7642
NaCl—$CaCl_2$ solid soln., pptn. from 3=20840
NaCl–$CdCl_2$ solid soln., hyperstructure regions 2=21521
NaCl–NaBr solid soln., theory 2=21456
$NaClO.5H_2O$ 3=3300
$NaClO_3$ absolute configuration, rel. to optical rotatory power 4=23479
sodium cobalt molybdate 4=10547
$NaCuF_3$ 2=23853
Na_2CuF_4 2=23853
NaF films, electron diffr. study 3=25680
$Na_3Fe_5O_9$ 2=23852
$NaHF_2$ and $NaDF_2$, FHF ion geometry 4=4623
$NaHF_2$, $NaDF_2$, H-bond meas. 4=28308
$Na_7H_4[Mn(IO_6)_3].17H_2O$ 2=23856
$Na_7H_4[Mn^{iv}(IO_6)_3].17H_2O$ 3=23460
$[Na_2H(PO_3)_3]_x$ 3=1337
$[Na_2H(PO_3)_3]_x$ 4=13605
$Na_2H_2P_4O_{12}$, 2-dimens. disordered OD-structure 4=23482
$Na_2H_2P_4O_{12}$, 2D disorder struct. 4=30855
$Na_nH_2P_nO_{3n+1}$, B form. 4=13605
$Na_2HPO_4.2H_2O$ 2=15036
$NaHgCl_3.2H_2O$ 0=21197
$Na_{0.975}K_{0.025}NbO_3$ 2=4427
NaN_3, changes at 19°C 4=26566
$NaNO_2$, calculation 2=15008
$NaNo_2$, rel. to dielec. dispersion 2=16768
$NaNO_2$, disordered structure at 185°C 2=10894
$NaNO_2$, ferroelectric phase transition 3=13397
$NaNO_2$, rel. to ferroelec. props. 2=4091
$NaNO_2$, fused 1=1443
$NaNO_2$, X-ray and neutron diffrac. study 3=1336
$NaNO_3$ 2=17012
$NaNO_3$, atomic scattering amplitudes 0=12025
$NaNO_3$, fused 1=1443
$NaNO_3$, non-approx. analysis of structure amplitudes 2=23851
$NaNO_3$, to 100 kbar 2=8811
$NaNO_3$, scale error effects 4=7581
$NaNO_3$, trigonal system, structure factors 1=1402
$NaNbO_3$ 2=4427
$NaNbO_3$, field-induced ferroelec. phase 3=8853
$NaNbO_3$, phase transitions, 20-700°C 2=2341
$NaNbO_3$—$KNbO_3$, three phases 3=8853

Crystal structure, atomic—contd
inorganic compounds—contd
$NaNbO_3$-$KSbO_3$, effect of substitution of Na by K 4=7035
$NaNbO_3$-$NaSbO_3$, effect of substitution of Nb by Sb 4=7035
$Na(Nb_{1-x}Ta_x)O_3$, transitions 3=13394
$Na(Nb_{1-x}V_x)O_3$, "ferrielec." and antiferroelec. structure 2=12571
$NaOH.4H_2O$ 4=29131
$(NaPO_3)_x$, Kurrol type B salts 3=18321
$(NaPO_3)x$, Maddrell's salt 3=16079
$NaPO_3NH_3$ 4=23484
$Na_4P_2O_7.10H_2O$ 4=23483
$Na_4P_4O_{12}.4H_2O$ 4=29139
$Na_5P_3O_{10}$ 4=23485
$Na_5P_3O_{10}$, phases I and II 0=8222-3
$Na_2SO_3.10H_2O$, $Na_2SO_3.7H_2O$, by X-ray diffr. 3=20854
$Na_2S_2O_6.2H_2O$ 3=8848
$Na_2S_2O_6.2H_2O$, arrangement of H atoms, p.m.r. meas. 4=7643
Na_3Sb 1=15081
$NaSbO_3$, pyrochlor and ilmenite forms 4=13501
$NaSn_2F_5$ 4=29138
$NaTcO_4$ 2=23854
$Na_2Ti_3O_7$, by single-crystal methods 1=20557
Na uranyl-8-quinolinate 0=4647
Na_xWO_3, neutron diffr. study 0=6361
$NaYF_4$, and transformation, 670° C 3=23455
$Na_2Zn_2O_3$ 4=17818
$Na_2Zn(SO_4)_2.4H_2O$, from proton mag. resonance 4=10550
$Na_5Zr_2F_{13}$, X-ray diffr. study 3=18315
$Na_4Zr_2[Si_8O_{22}]$, vlasovite 3=13474
Nb_3Al, X-ray determination 0=3221
Nb arsenides, transposition structure 4=4617
NbAs, transposition structure 4=4617
NbAs, z-parameter and shortest interactomic distances 4=29126
Nb_3Be_2 0=8211
NbC 0=10349
NbC, crystallographic data 1=1397
NbC, lattice const. rel. to Nb/C ratio 1=6515
NbI_4, α-phase 2=21518
Nb_3In, superconducting 2=17729
$Nb_2M_4O_9$, (M = Mg, Mn, Fe, Co or Ni) 1=2535
Nb—N crystals, with 0.9-1.3 at. % N 4=10032
NbO_2 2=23849
NbO_2 4=2086
Nb_2O_5, polymorphism 1=1398
NbO_2—Nb_2O_5, errors in using $Nb_{3n}O_{8n-3}$ formula 4=26659
$2Nb_2O_5.Ta_2O_5$, unit cell and space group 3=5111
$Nb_2O_5.3WO_3$ 4=26660
Nb monophosphides, transposition structure 4=4617
Nb—Ru alloys 3=22662
Nb_3Si, pseudo-f.c.c. 3=13514
$NbSn_2$ 4=13599
$NbSn_2$, supercond. 3=5592
Nb_3Sn, lattice parameter meas. 80° to 1290°K 4=30524
$Nd_2Mg_3(NO_3)_{12}.24H_2O$, space group 4=7632
Nd_2O_3, and thermal expansion, 20-1050°C 4=17372
Ni^{2+} site preference, effect of anion charge compensation 3=18222
Ni_5As_2, vapour grown with and without halogen 4=10543
$Ni_3(BO_3)_2$, space group, unit cell 4=2083
Ni carbides 4=13600
Ni_3C, electron diffraction study 3=1324
$NiCl_2$ 4=4616
$NiCl_2.6H_2O$ by X-ray single crystal method 1=20564
$NiCr_2O_4$ 1=6519
NiFe garnet, magnetostrictive displacement of O ions 4=13246
$NiFe_2O_4$ ferrite films 4=23586
$NiFeO_4$—Fe_2O_3 lattice dimensions and α-Fe_2O_3 precipitation 1=12641
Ni ferrite-magnetite, mag. cryst. anisotropy 2=12789
Ni hydride, f.c.c. lattice, H atom positions 3=25709
NiH 2=4415, 15028
Nickel hydride, neutron scattering meas. 4=29124
NiHF 2=10879
$NiHf_2$ 2=10879
$Ni(H_2O)_6SO_3$ 3=1339
$NiMoO_4$ 3=5110
Ni_4N, tetragonal form 1=7869

Crystal structure, atomic—contd
inorganic compounds—contd
$Ni(NO_3)_2.4H_2O$, unit cell and space group by X-ray diffr. 3=16084
Ni nitrate hexahydrate, unit cell parameter 0=7991
Ni oxides 1=11563
NiO, antiferrimag., by electron diffr. scatt. polarized 3=18111
NiO, distortion, and antiferromagnetism 4=13271
nickel oxide on nickel 1=1458
NiO, temp. factors 3=23444
NiO, by X-ray diffraction 1=10259
NiO—Mn_2O_3 0=14019
NiO_2, by X-ray diffraction 1=10259
NiO_2Cu 3=8856
NiO_2Na 3=8856
Ni_2O_3, by X-ray diffraction 1=10259
Ni_3O 3=18264
NiP_3 0=18347
Ni_2P 0=18360
Ni_5P_2, space gp., lattice parameters, relationship to Ni_5Si_2, Pd_5As_2 4=26664
$Ni_{12}P_5$ 0=18347
$NiRh_2O_4$ tetragonal distortion, phase transformation 4=23460
NiS_2, S—S distance 0=16322
$NiSO_4$, antiferromag. structure 2=6679
$NiSO_4.H_2O$ 3=18327
Ni_5Si_2, space gp., lattice parameters, relationship to Ni_5P_2, Pd_5As_2 4=26664
Ni_8Si_2B 0=18360
Ni_2SiO_4 spinel 4=30798
$NiTiO_3$, antiferromagnetic 0=21200
Ni_2TiX, CsCl-type structure 3=1344
Ni—Zn ferrites, X-ray investigation using CoKα radiation 0=16326
NiZr 2=10879
$NiZr_2$ 2=10879
Ni_2ZrAl, CsCl-type structure 3=1344
$NiZrH_3$, $NiZrD_3$, neutron diffn. analysis 4=29125
OsAl 0=6357
OsC 1=1399
$OsSb_2$ 1=4049
$P(CN)_3$ 4=29128
$(PNCl_2)_4$ 2=15031
P_2O_5 4=23462
P_2O_5—GeO_2—H_2O system compounds, from i.r. spectra 4=17814
10 P_2O_5. 90 Nb_2O_5, tetragonal phase 4=26666
P_2O_5—SiO_2—H_2O system compounds, from i.r. spectra 4=17814
10 P_2O_5. 90 Ta_2O_5 tetragonal phase 4=26666
P_4O_{10} 4=26667
$Pb_2V_2O_7$ 4=2075
$Pb_2Q_1Q_2O_6$ cpds. 4=23448
Pb—As—S cpds., crystal structures, comparison 2=12912-3
α-Pb azide 4=10538
Pb borate 4=15787
$(Pb, Ba)Nb_2O_6$, structure rel. to ferroelec. props. 0=8217
$PbBi_2Nb_2O_9$ 0=636
$PbBi_2Nb_2O_9$, struct. unfavourable to ferroelectricity 2=17026
$PbBi_2S_4$ 2=15035
$PbBiSe_2$ 2=21155
$PbBi_4Te_7$, alloy, superstructure III 4=30851
$PbBi_4Te_7$, electron diffraction analysis 3=6838
$PbBi_4Te_7$, electron diffr. study 3=13510
$(Pb, M)Nb_2O_6$, M=Ca, Sr, Ba 0=14035
$PbCl_2$ 4=13592
$PbCl_2$, cotunnite 2=8832
$PbCl_2$—TlCl system cpds 4=26655
$PbCuSO_4(OH)_2$(linarite) 0=12052
PbF_2, neutron diffraction investigation 1=15091
PbF_4 2=21519
Pb_2FeNbO_6 2=18769
Pb_2FeTaO_6 0=638
Pb_2FeTaO_6 2=18769
$Pb_3Fe_2WO_9$ 0=638
Pb_2MgWO_6 0=638
Pb_2MgWO_6 3=23459
Pb_2MgWO_6—$PbTiO_3$ solid solutions 3=23459
$PbNb_2O_6$ 2=14951
$PbNb_2O_6$-type cpds., nonstoichiometry 0=13652

Crystal structure, atomic—contd
  inorganic compounds—contd
    $Pb(Nb_{0.5}Sc_{0.5})O_3$, ferroelectric 1=1405
    $Pb_3NiNb_2O_9$—$Pb_3MgNb_2O_9$ system 1=11572
    Pb oxides 1=11563
    Pb—O system cpds 4=29214
    PbO 1=20451
    PbO, red and yellow, effect of neutron irrad. 4=26564
    PbO, tetragonal 2=4413
    PbO—B_2O_3 system, fused 1=1443
    $PbO.0.4H_2O$ 4=23449
    PbO_2, tetragonal, oxygen parameter 3=1329
    Pb polyphosphate, arrangement of anion chains 4=7623
    PbS films, effect of platelet precipitates on structure 4=7624
    PbS films, from i.r. transmission 2=10584
    PbSe films, from i.r. transmission 2=10584
    Pb selenate 0=16329
    $PbTa_2O_6$ 0=14035
    $PbTa_2O_6$ 1=20558
    $PbTa_2O_6$, Pb, Ta positions 4=23450
    $PbTa_2O_6$, $Pb(Ta, Nb)_2O_6$, $(Pb, Ba)Nb_2$-O_6, $(Pb, Sr)Ta_2O_6$ ferroelectrics 0=8218
    $Pb(Ta_{0.5}Sc_{0.5})O_3$, ferroelectric 1=1405
    PbTe films, from i.r. transmission 2=10584
    Pb titanate, effect of hydrostatic pressure up to 18, 000 kg/cm^2 2=12915, 21522
    $PbTiO_3$—$BaZrO_3$ system, X-ray study 3=13481
    $PbTiO_3$—$LaFeO_3$ system, modifications, by X-ray diffr. 3=20852
    $PbTiO_3$–$SrSnO_3$ solid solutions 1=20575
    $Pb_2TiP_2O_9$ 3=10982
    $Pb_2ZrAs_2O_9$ 3=10982
    Pb zirconate–titanate, modified by Bi ferrite 4=7049
    $Pb_2ZrP_2O_9$ 3=10982
    $Pb_2V_2O_7$ 4=2075
    Pd_5As_2, space gp., lattice parameters relationship to Ni_5Si_2, Ni_5P_2 4=26664
    PdMg 1=15077
    PdP_2, X-ray determination 4=7634
    Pd_4S 2=10880
    Pd_4Se 2=10880
    $Pd_{17}Se_{15}$ 2=15026
    Pm sesquioxide, from X-ray powder reflections 3=18311
    PrB_6 0=14020
    Pr_2C_3 3=1328
    Pr_2C_3, by neutron diffraction 2=4420
    $Pr(NO_3)_3.6H_2O$ 3=18326
    Pr oxides, rel. to dipole relaxation 3=8552
    Pr oxides, related props. 2=4418
    PtBi 3=18332
    $PtBi_2$ 3=18332
    $Pt(NH_3)_4CuCl_4$ 1=4056
    Pt–Pd–H and Pt–Pd–D systems 4=26720
    $PuAlO_3$, perovskite-type 1=15097
    $PuCrO_3$, perovskite-type 1=15097
    Pu nitrides and sulphides 3=16473
    PuNi 0=3222
    Pu–O compounds 4=29016
    Pu_3Ru, by powder diffraction method 4=10504
    Pu_5Ru_3, by powder diffraction method 4=10504
    $PuVO_3$, perovskite-type 1=15097
    Rb pentaborate 0=4644
    $RbBeF_3$ 3=20847
    $RbBe_2F_5$ 3=13484
    α-$RbBi_2$ 3=13518
    Rb_3Bi 1=4044
    RbBr 1=19724
    RbCl 1=19724
    RbCl, electron density distributions 1=15072
    $Rb_2Co(SO_4)_2.6H_2O$ 4=23435
    $RbCuF_4$ 2=23853
    $RbHSO_4$, ferroelectric transition 0=7980
    Rb halides, NaCl and CsCl structure 1=6516
    $(RbPO_3)_\infty$ 4=23468
    $RbSb_2$ 3=13518
    Rb_3Sb 1=4044
    Rb_3Sb 1=15081
    ReAl 0=6357
    $ReAl_6$, X-ray meas. 3=5115
    ReB_2 1=10881
    $ReBe_{22}$ 2=21517

Crystal structure, atomic—contd
  inorganic compounds—contd
    $ReBe_{22}$ 3=20839
    $ReBr_3$, unit cells, space group 4=17815
    $ReCl_3$, unit cells, space group 4=17815
    Re_2S_7 0=723
    Rh—Al (36.5-99.92 at.%), lattice spacings 3=18339
    $Rh_2(CO)_2Br_2$, polymeric 2=10234
    $Rh(CO)_2Cl_2$, polymeric 2=10234
    $Rh_{17}S_{15}$ 3=8841
    RuAl 0=6357
    Ru_7B_3 0=18349
    Ru_3Be_{17} 3=8839
    RuC 1=1399
    RuSb 1=4049
    $RuSb_2$ 1=4049
    $SF_3.BF_4$, unit cell and space group 4=26675
    S_4N_4 3=25712
    Sb oxides 1=11563
    Sb with Gp VIII elements 1=15123
    Sb_2Os 1=15123
    Sb_2Ru 1=15123
    SbSI, change on transition from non-polar to ferroelec. 4=20757
    Sb_2S_3–Sb_2Te_3 2=8352
    Sb_2Te_3–Bi_2Te_3, amorphous system 2=19081
    $ScCd_3$ 4=17816
    $ScFeO_3$ 2=4424
    $(Sc_{2-x}Fe_x)O_3$ 2=4424
    Sc_5Ge_3 3=8842
    ScH_2 0=21270
    Sc_3In 2=10882
    $Sc_2O[SiO_4]$ 3=13485
    ScP 3=11258
    Sc sulphide, selenide and telluride 4=4625
    Sc_5Si_3 3=8842
    $Sc_2Si_2O_7$ 3=13485
    $SeCl_4$ 4=23469
    SeO_3 2=15024
    SiC, crystal layer stacking 1=15074
    SiC, 417R and 453R 4=26672
    SiC, long period structure, X-ray investig. 4=23472
    SiC, long period, X-ray investig. 4=23472
    SiC, new modification 4=4621
    SiC, new polytype 2=10865
    SiC, of 174 layers 0=10314
    SiC, with 174 layers 1=7866
    Si carbide polytype 105R 4=7639
    Si carbide polytype 36H, anomalous 4=7640
    SiC, polytypes, anomalies 3=11212
    SiC, structure transformations 4=2089
    SiC whiskers, twist and polytype 0=1886
    $SiMgBaO_4$ 4=23473
    Si_2N_2O 4=23475
    SiO_2 cristobalite, α–β inversion temp., neutron irrad. effects 0=15878
    SiO_2, high-press. polymorphs, coord. rel. to spectra 4=1744
    SiO_2, precision lattice const. 1=1677-8
    $SiO_2.3CaO$, polymorphism 3=3301
    $SiZnBaO_4$ 4=23473
    $SnBr_4$ 3=18317
    $SnCl_2$ 3=5103
    SnF_2 2=10884
    SnF_4 2=21519
    SnI_4—S_8 3=13475
    $SnNiCu_2O_4$, $SnNiNa_2O_4$ 4=2079
    Sn oxides 1=11563
    SnO_2Cu 3=8856
    $[Sn(OH)_6]^{2-}M^{2+}$, (M=Zn, Cd, Co, Ni, Cu, Na), 2- ion, from spectrum, i. r. 4=10196
    SnO_2Na 3=8856
    Sn_2S_3 2=23848
    Sn sulphide, from films heated at 425° C 3=1327
    $SnSb_2Te_4$ 2=4426
    $SnSe_3$ 1=14475
    $(SnSe)_{1-x-y}(SnTe)_x(PfTe)_y$ 0=18364
    SnTe 4=1622
    SnTe, meas. rel. to stoichiometry 3=6604
    SnTe–CdTe system 4=23262
    SnTe–InTe system 4=23262
    Sr borates 4=15787
    $SrB_2O_4.4H_2O$ 4=29141

Crystal structure, atomic—contd
inorganic compounds—contd
$Sr[Ba](Fe_x, Nb_{2-x})O_6$ 4=10549
$SrBr_2$ 4=13604
$SrCO_3$, effect of neutron irrad. 4=26564
Sr_2FeO_3F 4=1623
Sr_2FeTaO_6, phase transform. at 250°C, X-ray study 3=18226
$SrGeO_3$, electron density projection plot 3=23456
$Sr(GeO_3)$, as model for $Ca(SiO_3)$ 3=18316
Sr_6Li_{23} and Sr_3Li_2 3=11266
$SrLiPO_4$:Cu 2=8578
Sr_2Mg_{17} 3=20837
Sr_2Mg_{17} 3=20838
$Sr(NiW)_{0.5}O_3$, phase transitions 3=8864
2SrO. 3BeO 2=17020
SrO.n$SrTiO_3$, layer struct. related to perovskite 4=23487
SrO.2Ta_2O_5, comparison with $PbTa_2O_6$ 4=13607
$Sr(OH)_2$. 8H_2O, neutron diffn., meas. and calc. 4=29147
β-$Sr_2P_2O_7$ 1=1403
$SrSnO_3$, γ-reson. absorption study, 78-1020°K 4=1350
$SrTa_2O_6$ 0=14035
$SrTiO_3$, rel. to phase transforms., 4. 2°-300°K 4=23293
$SrTiO_3$, from X-ray diffr., rel. to phase transforms., 4. 2°-300°K 4=23293
$SrTiO_3-Bi_2O_3.3TiO_2$, rel. to content, 77° and 300°K 4=10548
$SrTiO_3-Bi_2O_3.3TiO_2$ solid solutions, rel. to content, 77° and 300°K 4=10548
$Sr_2ZrAs_2O_9$ 3=10982
$Sr_2ZrP_2O_9$ 3=10982
$SrZrS_3$ 3=8850
Ta arsenides, transposition structure 4=4617
TaC 0=10349
Ta carbide, rel. to C content 4=13448
TaC, lattice parameter rel. to C content 2=2388
Ta_2D, neutron diffraction data 2=4421
$Ta_2M_4O_9$, (M = Mg, Mn, Fe, Co or Ni) 1=2535
Ta oxides 1=11563
Ta_2O_5 crystalline film, effect of heat 1=20674
10 Ta_2O_5. 90 Nb_2O_5, tetragonal phase 4=26666
Ta monophosphides, transposition structure 4=4617
TbAs 2=8827
TbB_4, TbB_6 0=14020
TbB_{12} 4=7649
TbBi 2=8827
TbC_2 3=1328
TbC_2, by neutron diffraction 2=4419
Tb_2C_3 3=1328
Tb_2C_3, by neutron diffraction 2=4420
TbP 2=8827
TbS 2=8827
TbSb 2=8827
TbSe 2=8827
TbTe 2=8827
$TcAl_6$, X-ray meas. 3=5115
$Tc_2(CO)_{10}$, unit cell and space group 3=3299
$TeCl_4$ 4=23469
Th_2Al—H and —D, by neutron diffr. and p.m.r. 3=20849
$Th_6Al_4H_8$, order or disorder of H 3=20768
Th_2Al—H system, by X-ray diffr. 3=20848
ThC_2, powder indexing and lattice constants 4=23491
$ThGe_2$ 1=15048
$Th_{0.9}Ge_2$ 2=15048
Th nitrides and sulphides 3=16473
ThO_2, by neutron diffraction meas. 3=20844
ThO_2, thermal atomic motions up to 1100°C 3=20845
Th_3P_4 type, as polyhedra arrangement 3=23450
ThPd 4=10553
$ThPd_3$, powder diffraction method 4=10554
$ThPd_4$, powder diffraction method 4=10554
ThSe 0=18054
$TiBO_3$, calcite structure, X-ray evidence 4=29105
$TlBiSe_2$ films 3=20850
TiC_2 3=1321
$TiCl_2$ 3=16076
TiCo, ordering in intermediate phase 0=18352
Ti_2Cu, Ti_4Cu_2O 4=7648
$TiCuF_3$ 2=23853
Ti_2CuF_4 2=23853
TiFe, ordering in intermediate phase 0=18352
Ti—H systems, X-ray structural phase anal. 0=14024
TiNi, ordering in intermediate phase 0=18352

Crystal structure, atomic—contd
inorganic compounds—contd
Ti_2Ni 0=4648
Ti_2Ni, correction 3=8845
Ti_2Ni, Ti_4Ni_2O 4=7648
$TiNiCu_2O_4$, $TiNiNa_2O_4$ 4=2079
Ti oxides 1=11563
Ti–O solid solution, lattice distortion due to O-interstitials 4=10557
TiO, absorption correction 0=1919
Ti monoxide, δ-Ti oxide 0=16310
TiO_2 1=4047
TiO_2, oxygen-deficient, lattice consts. 2=6811
TiO_2, space group repres. 2=2392
Ti_2O_3, effect of V_2O_3 impurity 1=17640
Ti_2O_3, rel. to imperfections 2=10375
Ti_2O_3, mag. structure, neutron diffr. meas. 3=15862
TiO_2Cu 3=8856
TiO_2Na 3=8856
TiO_2—Ti_2O_5, errors in using $Ti_{3n}O_{8n-3}$ formula 4=26659
$Ti_nO_{2n-1}(4 \leq n \leq 9)$, $Ti_{n-2}Cr_2O_{2n-1}(6 \leq n \leq 9)$, calc 4=7647
$(Ti, Re)Si_2$ 4=26676
Ti_5Se_8, face centred monoclinic, defect struct. formula representation $Ti_4(\square_3Ti)Se_8$ 4=29142
Ti_5Te_4 2=15041
$TlBX_4$, B = V, Nb, Ta; X = S, Se 4=23490
$TlBiSe_2$ films 0=16330
Tl_2HPO_3, basic parameters 1=20566
Tl halides, films on alkali halide cleavage faces 2=21561
Tl halides, NaCl and CsCl structure 1=6516
TlI 4=4627
TlI_3, unit cell dimensions and isomorphism with NH_4I_3 and CsI_3 3=11263
$(TlI)_4HgI_2$, from X-ray diffr. powder 4=2082
$Tl_{1/2}La_{1/2}Fe_{12}O_{19}$, a new ferrite 4=7292
TlN_3, lattice const. changes by irradiation 4=1545
Tl_2SO_4 1=1404
$TlSbS_2$ films 0=16330
Tl_2SeO_4 1=1404
Tm_2O_3, neutron diffraction determ. 4=10535
UAl_2-UFe_2 system containing $U(Fe, Al)_2$ 4=10558
U carbides, interatomic distances 3=20843
UC 4=13611
UC and UC_2 2=10867
UC_2 3=1328
UC_2 4=13611
UC_2, by neutron diffraction 2=4419
UC_2 (tetragonal) and U_2C_3 (cubic), geometrical relationship 3=3324
U_2C_3 4=13611
$UCoO_4$ 2=12662
UF_4 4=23495
UF_4, neutron diffn. comp. to X-ray diffn., fluorine posn. meas. 4=29146
U minerals, space group 3=11271
$UMoC_2$ 4=13608
U nitrides 4=2093
U nitrides and sulphides 3=16473
U—O system from U_3O_8 to UO_2 4=6991
UO_2, by neutron diffraction meas. 3=20844
UO_2, non-stoichiometric 4=23496
UO_2, thermal atomic motions up to 1100°C 3=20845
UO_2, UO_{2+x}, neutron diffn. analysis 4=29145
γ-UO_3 3=25713
UO_3 (mallinckrodt) 0=3224
U_3O_7, α and β-phases 2=10329
U_3O_8 4=23497
U_3O_8, neutron diffn. analysis 4=29144
U_3O_8 oxygen-deficient, "out-of-step" 3=811
U_4O_9 2=10885
U_4O_9, neutron diffn. analysis 4=29145
$UO_2(OH)_2$ 4=23498
UO_2MoO_4 4=23499
$UO_2-ThO_2-ZrO_2$ system 0=8229
UO_2WO_4 4=23499
$mX^{++}O.UO_3.nH_2O$, general structural formula 3=3305
$USi_{1.67}$, $USi_{1.88}$ and USi_2 1=15089
VBO_3, calcite structure, X-ray evidence 4=29105
V—H system 4=30856
$VO_x(x=0.75-1.74)$, composition depend. 0=18353
VO_2 2=15029
V_2O_3, low-temp. X-ray diffraction study 0=12046

Crystal structure, atomic—contd
inorganic compounds—contd
V_2O_3, 168-533°K, by neutron diffr., structural transition 0=6363
10 V_2O_5. 90 Nb_2O_5, tetragonal phase 4=26666
10 V_2O_5. 90 Ta_2O_5 tetragonal phase 4=26666
V_nO_{2n-1} $(4 \leqslant n \leqslant 8)$, calc. 4=7647
$V(S_2)_2$ (patronite) 4=26677
V_3S, α and β forms 0=4629
V_5S_8 and vacancy order 4=26678
V_5Se_8 and vacancy order 4=26678
WBe_{22} 3=20839
WC 1=11566
WC 1=20451
WC, by neutron diffraction 2=10866
W_2C 1=11566
W_2C, electron diffr. study 1=15083
W—N system, superlattice and disordered phases 3=23451
W nitride, cubic form, electron diffraction study 0=14023
W nitride, hexagonal 4=23494
W nitride II, rhombohedral, chemical crystallog. 3=20842
W nitrides, phase anal., electron diffraction study 0=14022
W_2N, hexagonal II 1=15086
W_3N_6 films, rhombohedral, 3=13460
W oxides 1=11563
WO_3, Ag-doped 0=17922
WO_3, colloidal 3=18408
WO_3, monoclinic, at room temp. 1=9136
WO_3, patterns produced by heat treatment 1=15080
WO_4, below room temp. 1=9100
WO_3, triclinic form, transition near 17°C 0=18375
$W_xTa_{1-x}Se_2$, x = 0.10-0.99, X-ray study 3=23029
XeF_2 3=16073-4
XeF_2, neutron diffn., meas. and calc. 4=29147
$XeF_2 : XeF_4$ 4=4628
XeF_4 3=6846
XeF_4 3=12844
XeF_4 3=16073, 16075
XeF_4, monoclinic phase 3=23452
XeF_4, neutron diffn., meas. and calc. 4=29147
$XeOF_4$, from microwave spectrum, 20-40 Gc/s 4=26225
$Y_3Al_3Fe_2O_{12}$, ionic distrib. 1=20562
YBe_3 and ABe_{13} compounds 4=15797
$(Y_{2.75}Bi_{0.25})Fe_{5-x}Al_xO_{12}$, effect of Bi^{3+} substitution 4=23023
YC_2 3=1328
YC_2, by neutron diffraction 2=4419
Y chromates 4=29135
YCu_2 4=4630
Y—Eu garnets 3=3124
YFe garnet containing Nd, Pr, La ions 1=20567
YFe garnet, refinement 3=8834
YFe garnet, Nd-substituted 1=12842
YFe garnet, Sb^{5+} substituted for Fe^{3+} 4=26344
YFe–GdFe garnets, lattice consts., rel. to composition 0=3089
Y garnet, effect of substitution of Fe by Sc 4=7650
Y hexaboride 0=1879
YH_3 and YD_3 3=17658
YI_3, lattice constants 3=25714
$YMnO_3$ 3=25722
$YMnO_3$, rel. to magnetic props. 4=7294
Y_2O_3. 2BeO 2=17020
$3Y_2O_3.(5-x)Fe_2O_3.xIn_2O_3$, polycrystalline 1=20143
YP 3=11258
YbB_{12} 4=7649
YbC_2 3=1328
YbC_2, by neutron diffraction 2=4419
Zn–Al system (40-75 wt% Zn) 4=23299
(Zn, Cd)S : Cu phosphors, X, γ-ray effects 3=23457
$Zn_xCd_{1-x}Sb$ solid solns. 2=23889
$ZnCl_2$, α- and β-phases 0=1908
ZnF_2, temp. var., and thermal expansion 4=9863
$ZnIn_2S_4$ 2=23475
$ZnIn_2S_4$ 4=28738
$ZnMn_2O_4$, refined structure calc., computer program 0=4623
$Zn_{1+x}Mn_{2-x}O_4$, tetragonal distortion rel. to composition 4=15555
$Zn_xMn_{3-x}O_4$, tetragonal distortion rel. to composition 4=15555
$Zn_2Mn[SiO_4][OH]_2$ 4=13614
$Zn(NH_4)_2(SO_4)_2$. $6H_2O$, from X-ray data 4=30857

Crystal structure, atomic—contd
inorganic compounds—contd
Zn oxides 1=11563
ZnO, crystallographic polarity 3=11259
ZnO, electron density distrib. 1=20538
ZnO, high-pressure polymorph 3=3254
ZnO, and semicond., dielec., optical props. 4=22725
$ZnO-B_2O_3$, different proportions 2=2254
$Zn_4O(BO_2)_6$ 2=10896
$7ZnO.Sb_2O_5$ 3=3274
7 ZnO. Sb_2O_5, ratio Zn : Sb 4=4631
$Zn_5(OH)_6(CO_3)_2$ 4=26680
ZnP_2, tetragonal and monoclinic 3=16072
$Zn_3(PO_4)_2$, γ-phase 3=6849
$Zn_2P_2O_7$:Mn and $Zn_2P_2O_7$:Cu, space group rel. to temp. 4=26572
ZnS 1=6500
ZnS, grown from flux 2=16985
ZnS, rel. to growth from vapour 2=14942
ZnS, rel. to HCl proportion in vapour phase during growth 2=8788
ZnS, heat treatment effects 0=10287
ZnS, hexagonal, growth from melt 0=1880
ZnS, rel. to luminescence props. 2=16859
ZnS, symmetry props. 0=11783
ZnS, rel. to temp. 2=6810
ZnS, vapour-phase grown 1=2524
ZnS and wurtzite-type crystals, bonding 1=2365
ZnS and ZnS–FeS, lattice spacing 0=10316
ZnS—CdS, rel. to electroluminescence 1=9012
ZnS:Cu, effects of quenching 4=15618
ZnS:Cu, incorporation of Cu rel. to luminesc. 3=10996
ZnS: (Cu, Ag or Al), crystalline transformations 0=11998
ZnS:Cu, Cl, and electroluminescence 3=23123
$ZnSO_4.H_2O$ 3=18327
ZnSb 1=15076
ZnSb 4=29148
ZnSb—CdSb films 4=12917
ZnSe films 4=23352
ZnSe, with growth defects 1=4045
ZnSe, hexagonal modification 3=16070
ZnSe–HgSe solid solutions, lattice parameter rel. to Zn concentration 4=15798
$ZnSnAs_2$ 0=8224
$ZnSnAs_2$, chalcopyrites or zincblende? 3=11267
ZnTe 2=8829
ZnTe–HgTe solid solutions, lattice parameter rel. to Zn concentration 4=15798
Zn tungstate 4=15477
$ZrAl_2$, comp. with Zr_2Al_3 2=10886
Zr_4Al_3 0=4631
Zr_5Al_3 0=3223
$ZrBe_5$ 0=724
Zr_2Be_{17} 0=724
ZrC, lattice constant 0=10315
ZrC, and phase transform., ~2200°C, fruitless search 4=17775
Zr–H systems, X-ray structural phase anal. 0=14024
$\beta-ZrH_2$, statistical model 4=20766
Zr oxides 1=11563
ZrO_2 0=3225
ZrO_2 films meas. 3=8577
ZrO_2, monoclinic (baddeleyite) 1=10261
ZrO_2, tetragonal 3=6845
ZrO_2-CaO, fluorite phase 3=25728
$ZrO_2-La_2O_3$ system, cond., elec., var. temp., freq., composition 4=25990
zirconyl perchlorate dihydrate 4=4632
$Zr_3(PO_4)_4$ 1=2537
Zr—Ti—O long range ordering 3=3289
organic compounds
acepleiadylene 0=8240
acetic acid, n. m. r. study 0=18231
acetylacetonates of Zr, Ce, Th and U 0=3246
aconitine hydrochloride, hydrobromide, and hydroiodide, unit cell and space group 0=8244
adenosine-5'-phosphate 3=8871
allene 2=14684
allokainic acid 0=3253
2-amino azulene 0=21203
anthracene, correction for temp. diffuse scatt. 2=17009
anthracene derivatives 0=4658
anthracene, 95° and 290°K 4=23501

Crystal structure, atomic—contd
organic compounds—contd
anthracene, simultaneous X-ray diffraction 4=7652
anthracene, temp. diffuse scatt. 1=9969
anthracene, X-ray diffrn. patterns 3=20859-60
9-anthraldehyde 0=4658
anthraquinones, substituted 3=23462
anthrone, statisticel structure 1=9143
anthrone, 2-dimens. Fourier synthesis 0=18366
benzene, liquid 2=15564
benzene at −3°C, plane orientation, rel. to Raman spectra 4=30691
benzene diazonium salts, 11 substituted 4=23503
δ-benzene hexachloride, bond angles, nucl. quadrupole resonance study 3=8872
benzoic acids, substituted, molecular overcrowding study 0=3249
p-benzoquinone 0=8231
1:12-benzperylene, structure refinement 0=4656
bis-acetylacetone beryllium 0=8238
bis-ethylenethiourea-Cd thiocyanate 0=6367
bis (N,N-diethyldithiocarbamate)-Cu 1=20568
bis-salicylaldehydato-nickel, cell size and space group 0=3247
bis-salicylaldiminato-nickel (II) and -copper (II) 0=4653
bromanil 1=15111
cadmium bromide dipyridnate, by X-ray diffraction 3=6854
caffeine, arrangement of water molecules 0=6369
carbon tetrabromide p-xylene complex 2=17027
cellulose 1=7836
chain molecules, symmetry 1=14137
chloranil 1=15111
choline halides 0=8245
cis-dizido-bis-ethylenediamine cobalt nitrate 4=13587
cis 1, 4 polybutadiene 0=4675
clathrate hydrates 1=20569
clathrate hydrates, tetra n-butyl ammonium benzoate hydrate 3=3308
clathrate hydrates, tri n-butyl sulphonium fluoride hydrate 3=3309
cotton cellulose, crystallinity, X-ray determination 0=1918
9-cyano-anthracene 0=4657
cyanogen 3=25729
cyanogen, dipole—dipole coupling 4=4280
cyclohexane, liquid 2=15564
cyclohexanone, space group at −180°C 0=18367
cyclo-octatetraene complex with Fe tricarbonyl 3=2643
cyclopropane, from i.r. spectrum 1=14603
L-cystine dihydrobromide 0=8234
L-cystine hydrobromide, β-synthesis methods 4=20767
cytosine monohydrate ($C_4H_5N_3O.H_2O$) 3=8868
dibenzene chromium mol., symmetry assessments 4=22389
3, 5- dibromo para-amino benzoic acid 3=13490
ortho-dichlorobenzene, rel. to n. q. r. 4=13355
4, 4′-dichlorodiphenyl sulphone 0=4659-60
dicyandiamide, and H atom positions 4=23504
$3, 3^1$-diethylthiocarbocyanin chloride 4=10563
diglycine nitrate 4=7653
1, 8-dihydroxy anthraquinone 3=13491
diketopiperazine (2, 5-piperazinedione) 0=3251
dimethyl-9:10-dihydroanthracene-9:10-dicarboxylate, cis and trans isomers 0=8243
1, 5-dinitronaphthalene 0=8232
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    - CdS, mechanism, crystal form, effect of dislocations 0=21160
    - CdS, mono- and polycrystals, for γ-detector 0=313
    - CdS, rel. to photo and dark conductivity 1=14963
    - CdS, photolysis, Cd particles growth 2=4553
    - CdS, prep. of photosensitive monocrystals 2=16989, 18734
    - CdS, pure, effect on photosensitivity 2=10527
    - CdS, on silica and quartz 3=16041
    - CdS, single crystals 2=6766
    - CdS single crystals, from the powder 0=21165
    - CdS, sublimation method for large single crystals 4=10469
    - CdS, in vacuum, etch pattern with 6-fold symmetry 1=1366
    - CdS, from vapour, dislocations meas. 4=20281
    - CdS, from vapour phase, in argon stream 0=8154
    - CdS from vapour phase on inside of silica tube 0=18313
    - CdS.CdSe, rel. to photo and dark conductivity 1=14963
    - CdS.CdSe, prep. and photoconductivity studies 0=7957
    - CdS–CdTe, single crystals 0=621
    - CdS:Cu, p-type 0=4356
    - CdS:I by vapour transport with I, after-treatment 2=6495
    - Cd–Sb 1=11543
    - CdSb 2=21478
    - CdSb, doping, using Cd-rich Cd–Sb alloy 4=29045
    - CdSb, phase separation, by centrifuging melt 4=4543
    - CdSb single crystals 3=5087
    - CdSe, from gaseous phase 3=20977
    - CdSe, rel. to photo and dark conductivity 1=14963
    - CdSe single crystals, Reynolds–Greene method 4=22797
    - CdSe, single layers 2=4380, 6768
    - $CdSnAs_2$, n-type 1=17723
    - CdTe, differences between opposite faces, from vapour 4=4542
    - CdTe, single crystals, from melt 3=1267
    - CdTe, by static sublimation on cool wall under pressure 4=15758
    - CdTe, sublimation 4=7547
    - CdTe, from vapour, growth patterns meas. 3=18259
    - CdTe, from vapour, habit and twinning 2=6769
    - CeF_2, highly-perfect single crystals, for masers 3=23397
    - Co, electrodeposited, growth habits 4=23346
    - Co particles from $CoBr_2$, ext. symmetry, twinning effect 4=26594
    - Co whiskers, by H_2 reduction of $CoBr_2$ 4=23258
    - Co whiskers, parallel dislocation in 2=6332
    - $Co_{3-x}Fe_xO_4$ 2=21479
    - Co ferrite 1=7846
    - Co ferrite, ferrous free 3=11230
    - Co ferrite from system $Na_2O-CoO-Fe_2O_3$ 2=12744
    - Co–Mn ferrite 1=10168
    - Co oxides 1=11563
    - CoO, epitaxial growth on Co 1=15015
    - CoO single cryst., by Verneuil method 4=29048
    - Co_3O_4, epitaxial growth of Co 1=15015
    - CoSi, cold hearth zone refining 1=11545
    - $CoSi_2$, cold hearth zone refining 1=11545
    - Cr, grains, 900-1100°C 2=12445
    - Cr, impurity effects 4=7424
    - Cr, whiskers 4=10483
    - Cr alum, in silica gel 0=13946
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    - Cr carbide, nucleation on twin boundaries austenitic steels 2=2408
    - CsCl, from solution and melt 0=18306
    - CsCl whiskers, from aqueous films, capillary rise 0=1887
    - CsI, in amoule 2=2249
    - CsI, from melt, luminescence props. 0=13705
    - Cu 1=4012
    - Cu 4=7537
    - Cu, cube-texture, Rowland mechanism of secondary nucleation 0=18300
    - Cu, dendritic electrodeposits, orientated growth 2=6765
    - Cu, dumbbell-shaped, preselected orientation 3=23391
    - Cu, electrocrystallization 3=23415
    - Cu, epitaxial oxidation, (111) faces 2=6482
    - Cu, epitaxial on W field emitters 3=25681
    - Cu, epitaxially on NaCl cleaved in vac. 4=29070

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    - Cu, few dislocations, by Bridgman and Czochralski methods 4=4544
    - Cu films condensed on Cu 0=733
    - Cu films, recrystallization time thickness var. 4=23571
    - Cu hexagonal form by condensation on Zn 0=4595
    - Cu, high-purity, recrystallization 2=2362
    - Cu, in liquid Bi, kinetics 0=21162
    - Cu, with low dislocation density 4=23337
    - Cu, oxidation, electron-diffraction study 3=13417
    - Cu oxidation, needle growth 0=13960
    - Cu, polygonization 1=4011
    - Cu, recrystallization, rel. to temp. and heating time 2=19095
    - Cu, on rocksalt, epitaxial growth 2=16996
    - Cu single crystals 0=10283
    - Cu single crystals, electroplating deposit structures 0=1892
    - Cu, twinning dislocations on evaporation 0=16278
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    - Cu whiskers, CuCl reduction in H_2, mechanism 0=18319
    - Cu whiskers, CuI reduction in H_2, mechanism 0=18318
    - Cu whiskers, effect of electric field 1=11547
    - Cu whiskers, effect of impurities 3=20726
    - Cu whiskers, growth kinks 0=18323
    - Cu whiskers, by H reduction of CuI 0=1888
    - Cu whiskers, from halide reduction, velocity 1=15005
    - Cu whiskers, platelet modification 4=17793
    - Cu whiskers, prep. 0=3185
    - Cu whiskers, by vapour reduction 3=18277
    - $CuAl_2$–Al eutectic alloys, grain structure 3=11283
    - Cu–Al–Ni, martensitic γ'-phase, under external stress 2=23824
    - Cu–Ge alloy with ideal axial ratio 4=7422
    - cuprous halide layers on Cu single crystals 2=19060
    - Cu oxides 1=11563
    - CuO, needle growth rate on Cu 0=6331
    - Cu oxide whiskers 3=18280
    - CuO whiskers, on Cu, 250-450°C 1=6502
    - CuO whiskers (needles) 0=16277
    - Cu_2O on Cu, epitaxially induced strains 2=17065-6
    - Cu_2O +CuO whiskers, on Cu 2=10803
    - Cu_2O formation in Cu 2=16986
    - Cu_2O, large area single crystals 0=10284
    - Cu_2O nucleation on Cu under O ion bombardment 4=26613
    - Cu_2O, by oxidation 4=13531
    - Cu oxinate 3=18257
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    - Cu, sulphide layer growth in S vapour 0=13959
    - Er_2O_3, flame fusion growth 3=8805
    - Fe filament layers 4=10457
    - Fe films on substrates, mag. anisotropy 0=11868
    - Fe, high-purity, recrystallization kinetics 4=15761
    - Fe layers on Cu, electrolytic, outward growth obs. by electron diffraction 4=4531
    - Fe, precip. in β-brass-iron 0=2993
    - Fe, pyramids on whisker surfaces 4=29064
    - Fe single crystal films, epitaxial growth 1=6318
    - α-Fe single crystals, by halogen reduction 1=15006
    - Fe, single, by zone melting, preformed nuclei 3=13420
    - Fe trichites, arc shaped 4=4549
    - Fe whiskers, by chem. transport 3=5090
    - Fe whiskers, from double spiral source 0=6334
    - Fe whiskers, electron interferometer study 1=11548
    - Fe, whiskers growth, influence of elec. field 1=20447
    - Fe whiskers, from H_2 reduced $FeCl_2$ 0=3184
    - Fe whiskers, mag. field effects 3=13422
    - Fe whiskers, nucleation sites, oxide replica technique 4=2036
    - Fe whiskers, prep. 0=3185
    - Fe whiskers, by vapour reduction 3=18277
    - Fe, zone-melted, slip, unusual 3=10678
    - $Fe^{2+} Al^{3+}_{0.3} Fe^{3+}_{1.7} O_4$ 1=10168
    - $FeAl_2O_4-MgAl_2O_4$ mixed crystals 4=20514
    - Fe_2C, fine powder hexagonal 1=20420
    - Fe carbide precipitation in quench ageing of alloys 2=2410
    - $Fe_xCd_{1-x}Cr_2S_4$ 4=29115
    - Fe ferrites, Czochralski method 1=7847

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Fe oxides 1=11563
FeO thin films on Fe whisker surfaces 4=4668
Fe oxide, rel. to surrounding gas 3=18433
Fe, oxide whiskers and platelets, effect of imperfections 1=4077
Fe_2O_3, filaments and plates 3=3268
α-Fe_2O_3, from $Li_2O-B_2O_3-Fe_2O_3$ system, rel. to phase equilibria 4=7560
Fe_2O_3, Pb pyrophosphate as flux 3=5083
Fe_3O_4, by chemical transport 2=10798
FeS growth spirals 4=26601
Fe–3% Si, cubic growth by atmosphere control 0=12007
Fe-Si (3%), on deformation and annealing, mag. field effects 4=13536
Fe—Si(3%), oriented 4=30820
Fe—Si (3¼%), (100)[001] or (110)[001] texture prod. 4=26599
Fe-Si, secondary recrystallization 0=10285
Fe–3% Si, alloys, secondary recrystallization 0=16264
$FeSn_2$, and morphology 4=26600
Ga single crystals, from the melt 1=14529
Ga, from melt, mechanism 4=29050
GaAs, contamination 3=1274
GaAs, contamination sources 2=10801
GaAs, crystal-pulling furnace 1=14994
GaAs dendrite, structure diffs. on opposite {111} faces 2=8784
GaAs, different seed orientations, pulling from melt 4=7553
GaAs, effect of As pressure on Ge doping 0=20915
GaAs, epitaxial films, vapour phase reaction 3=11239
GaAs films on Ge, by flash evaporation in vacuum 4=13681
GaAs, by free surface method 4=7552
GaAs from Ga, zone-melting technique 3=23410
GaAs and GaP lamellae 4=26580
GaAs on Ge substrates, epitaxial growth and deposition on high index planes and curved surfaces 4=29066-8
GaAs on Ge, vapour epitaxy 2=8801
GaAs, habits 2=21462
GaAs, high-purity, from melt 2=19048
GaAs, horizontal zone melting 0=8166
GaAs, horizontally, in quartz boats 2=19049
GaAs, leaf-like flakes, morphology 2=4414
GaAs, in ⟨111⟩ polar direction 0=18312
GaAs, purification and growth apparatus 0=18317
GaAs, reduction of Si contamination 3=13416
GaAs, single crystals, using carbon boats 1=14998
GaAs, sources of contamination 4=29052
GaAs, surface spirals 0=13958
GaAs on surfaces of GaAs and Ge, epitaxy 3=20806
GaAs, vapour growth 2=4377
GaAs, from vapour phase 1=20418
GaAs, from vapour phase 2=10793
GaAs, from vapour phase, major axis 3=13404
GaAs—GaP alloys, vapour, prep. technique 4=4546
GaAs—I_2, epitaxial vapour growth, kinetics 4=7551
$Ga(As_{1-x}P_x)$, {111}—{100} faces, texture, props. rel. to lasers 4=29051
GaP, carbon impurity from graphite boat 1=17734
GaP, from elemental Ga and P 2=809
GaP, epitaxial films, vapour phase reaction 3=11239
GaP, epitaxial, by Ga_2O vapour transport 4=15770
GaP, habits 2=21462
GaP, single crystals 1=17775
GaP single crystals, growth from the melt 4=7550
GaP and Sn solubility 4=28999
GaP, travelling solvent method 4=23338
GaP, from vapour phase 1=20418
GaS, spirals 3=11231
GaS, GaSe, GaTe, drawing of single crystals 2=6778
GaSb, effect of max. melting point 4=16290
GaSb and Ga—Sb distribution coeffs., Zn^{65} 4=4072
GaSb, reduction of high acceptor conc. 4=23339
GaSb–InSb alloys 0=6120
GaSe, single crystals, from elements, then gradient freeze crystallization 0=1681
GaSe, spirals 3=11231
Gd to Tm rare earths, large crystals 4=4551
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Ge, atomically flat surfaces on dendrites 0=12010

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Ge, containing Al or Ga in solid soln. 0=12080
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Ge, dendrites, etch pit orientation 0=12011
Ge dendrites, growth mechanism 3=25678
Ge dendrites from melted Ge 3=21614
Ge, dendrites, optical studies, central twin plane confirmed 1=6503
Ge, dendrites, propagation mech. 0=12009
Ge, dendritic growth mechanism 3=13421
Ge, dendritic growth from supercooled melts 0=18321
Ge, dendritic growth, technique and mechanism 0=1891
Ge, dendritic ribbons 1=15007-9
Ge, dendritic strips, directional 3=18282
Ge, dendritic, twinning and impurity segregation 2=14937, 19047
Ge, dislocation formation 0=13536
Ge, dislocation-free 0=1588
Ge, dislocation-free 1=4026
Ge, dislocation loops 0=20814
Ge, doping meas., nomograph technique 2=10477
Ge, double-crucible method 3=13418
Ge, epitaxial on CaF_2 4=10486
Ge, epitaxial films, formation conditions 4=7574
Ge, epitaxial growth, direct obs. 4=4564
Ge, epitaxial, iodide method, temp. 3=23417
Ge, epitaxial layer 3=18283
Ge, epitaxial layers, rate, rel. to doping 4=7573
Ge, epitaxial, from vapour, effect of elec. field 4=10488
Ge, epitaxial, using water vapour 4=4561
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Ge, epitaxy on single crystals, structure 3=3280
Ge, facet formation 3=6823
Ge, films, epitaxial, rel. to deposition parameters 4=20807
Ge films, epitaxial formation conditions 3=18284
Ge films, epitaxial, iodide process 4=10485
Ge films, epitaxially deposited 0=17938
Ge films, from gas phase 2=10792
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Ge, films, pyrolytic, etching is not necessary for low defects in growth 4=17844
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Ge, Ga-doped, constitutional supercooling 3=13414
Ge, on GaAs 0=18026
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Ge, from gaseous phase using 2nd component 4=10471
Ge, growth conditions 0=4590
Ge, growth striations in contact with metals 0=16260
Ge, high purity, special apparatus 1=7851
Ge, highly doped, As 3=20792
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Ge, improvement of pedestal method 0=12006
Ge, impurity doping in vapour growth 4=7555
Ge, interaction of In and Ga dopants 3=20793
Ge, interaction of O_2 and Al rel. to dopants 4=1606
Ge junction, vapour-grown, closed cycle iodide process 0=18023
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Ge layers, thin, conds. 2=8791, 10797
Ge layers, vapour dep. structure 2=19112
Ge, from melt, Fe and Sn segregation and solubility 1=11583
Ge, method for known impurity concns. 2=10791
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Ge, monocrystals, use of Peltier effect 2=810
Ge platelets, twinned 3=20781
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Ge, by pulling, dislocation-free 1=1378
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Ge single crystals, resistivity striations 1=12379
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Ge, transition detection, by autodecoration 4=2041
Ge, vapour-grown, incorporation of As 0=17967
Ge, vapour-growth, diffusion limited 4=26596
Ge, vapour growth, impurity doping 4=1470
Ge, web growth 4=13533
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Ge—Si alloy films, from vapour, on Ge 4=7554
Ge–Si alloys, by vertical recryst. zone method 4=10472
Ge—Si, floating-zone technique 4=7557
Ge–Si solid solutions, whiskers and needles 4=10480
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$HgIn_2S_4$ 1=10066
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HgS, raising-crucible method for single crystal growth 4=17781
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HgS, 3 methods 2=8797
HgS, from vapour, effect of phase transform. 2=16976
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InSb crystal–melt interface, facets correl. with crystal growth mechanism 4=10475
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InSb, dendritic 4=15769
InSb, growth twins 1=7838
InSb, high-purity, preparation 1=7848
InSb, impurities in melt-grown crystals, orientation depend. 1=17520
InSb, impurity conc. rel. to temp. fluctuations 2=21473
InSb, from In and Sb seed crystals 0=3175
InSb, from the melt, effect of {111} facet on solute distrib. 0=21154
InSb, p–n juncns. 1=7651
InSb, phase separation, by centrifuging melt 4=4543
InSb, pulled, {100} facets 2=19041
InSb, review 1=6158
InSb, rotation, rel. to impurity striations 1=17519
InSb, web growth 4=13533
InSb by zone melting and pulling 1=7653
InSb, zone-melting, ultra-pure 4=23341
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InSb—Sb, by eutectic crystallization 3=23401
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K, by condensation on Ag wire, in supersaturated vapour, diffusion effects 0=18309
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K, rate of growth, rel. to vapour pressure 0=13961
K, from vapour, unit condensation coeffts. 3=3271
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K whiskers 4=4559
K whiskers, from vapour, by field emission 3=3276
$KAl(SO_4)_2.12H_2O$, rel. to movement and faceting 3=16034
KBr, dendrites, rel. to conc. distrib. in solution 2=23818
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KCN, single crystal growth, and purification 4=26608
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KCl, filament and point production 0=18315
KCl, metal dendrites, in prebreakdown phenomena 1=19933
KCl, metal dendrites in prebreakdown phenomena 2=8470
KCl, Pb impurity entry, rel. to vibration 4=30821
KCl, pure 1=12622
KCl, rate in O_2 and A atmospheres 2=18834
KCl, single crystal laminae 2=10795

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KCl, surface features, Czochralski growth method 3=11218
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KCl, whiskers, from aq. soln. 2=4395
KCl, whiskers, secondary and tertiary at 550° C 2=4394
KCl–KBr mixed crystals, defect props. 2=3912
$KClO_3$, single crystal laminae 2=10795
$K_3Co(CN)_6$, Cr-doped, for maser use 0=4520
$K_3Co(CN)_6$, impurity effects 0=6325
KI 3=20795
KI–TlI, temp. gradient, effect on TlI distrib. 1=20421
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$KMnO_4$, directed, rel. to ultrasonics 3=16044
KNO_3, from supersat. soln., critical dimensions 2=21488
$K_2O—Nb_2O_5$, peculiarities 3=16033
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K_2SO_4, impurity distrib. during crystallization 4=29062
La ethyl sulphate, with Ga and Ce ethyl sulphate impurities 2=19057
LaF_2, highly-perfect single crystals, for masers 3=23397
LaF_3, doped, single-crystal, Čzochralski growth 4=13542
LaF_3, single, by Czochralski method 4=23345
Li isotope separation by crystallization 0=1474
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LiF, from aqueous solutions, poisoning 0=21159
LiF, dry method 3=23404
LiF, films, evap. on C 3=1375
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LiF, from melt, rel. to optical absorption 2=14949
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LiF, ⟨100⟩ dielec. breakdown dendrites, structure 2=8775
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$LiFeO_2$, from $Li_2O—B_2O_3—Fe_2O_3$ system, rel. to phase equilibria 4=7560
$LiFe_5O_8$, from $Li_2O–B_2O_3–Fe_2O_3$ system, rel. to phase equilibria 4=7560
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MgAl ferrites 1=20440
MgAl ferrites, prep. and props. of monocrystals 2=4381
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Mg ferrites, free and forced orientation, Verneuil method 1=1374
$MgFe_2O_4$, Pb pyrophosphate as flux 3=5083
$MgGa_2O_4$ spinel from molten $PbO–PbF_2$ solns. 2=16984
Mg–Mn ferrites, free and forced orientation, Verneuil method 1=1374
MgO, Pb pyrophosphate as flux 3=5083
MgO, sintered, water vapour effect 4=23546
$MgO.Al_2O_3$ (spinel), flame-fusion growth 0=16033
$MgSO_4.7H_2O$, thermo-syphon method 0=4422
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$MnCO_3$ in $MnCO_3—RCl—H_2O$, [R = Na, Li, K, Ca, Mn,-Co], 3=18267
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MnMg ferrites 1=20441
MnMg ferrites 2=4382
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$MnSi_{1.72}$, Czochralski method 4=29012
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Mn–Zn ferrite, effect of voids and inclusions 3=3269
Mo epitaxy, by partial molybdenite decomposition 4=29069
Mo, by floating zone refining and melting by electron bombardment 4=23349
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Mo, torsion induced recrystallization 2=8785
MoO_3, anomalous 1=9110
Mo oxides 1=11563
Mo oxide, filament formation 0=6332
MoO_3 whiskers, hydrothermal cond., on $MoO_3—SiO_2$ 1=9119
NH_4Cl, crystallization centre formation from drop, under electric field 2=4387
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    NH_4Cl, monocrystals, from solutions, effect of pectin 0=16262
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    Na–$CdCl_2$, metastable centres, precipitation 1=12624
    NaCl, adsorption at crystal—solution boundary 4=20736
    NaCl, with divalent cation imps. 2=12438
    NaCl, face patterns, on heating, impurity effects 4=4553
    NaCl, growth form, effect of organic solutes 2=8789
    NaCl, holes and mosaic structure 3=1263
    NaCl lattice, OH^- ion introduction 3=8432
    NaCl, mechanism 0=16256
    NaCl, melt-grown, alkalinity 0=13943
    NaCl, on mica cleavage surfs. 2=8786
    NaCl, monocrystals, new layers, penetration of dislocations 2=4376
    NaCl, plastically deformed in solution and vapour, further growth 4=13548
    NaCl, pure 1=12622
    NaCl, in silica gel 0=13946
    NaCl, from sublimed vapour 0=711, 4596
    NaCl, surface features, Czochralski growth method 3=11218
    NaCl, TlCl-activated phosphors, afterglow depend. on preparation 0=8019
    NaCl, twisted whiskers 1=6504
    NaCl type in presence of ferro-, ferricyanide ions 2=12887
    NaCl whiskers 1=10242
    NaCl whiskers 1=20448
    NaCl, whiskers 3=20804
    NaCl whiskers, by vapour deposition 4=29065
    $NaClO_3$, speed 3=1262
    NaI:Tl, Kiropoulos' method, impurities 4=2035
    NaI:Tl, from melt, Tl distrib. 1=11542
    NaI:Tl, Tl distrib. during growth 1=14976
    NaI:Tl, 2-heater method, for large crystals 1=4025
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    Nb, using induction plasma torch 2=2365
    Nb—Sn films on Nb, by anodic oxidation diffusion and superconductivity 4=8571
    Ni 4=7537
    Ni, bicrystal seed orientation technique 4=23301
    Ni, cathodes, relation to adhesion and emission 3=19131
    Ni, dendrite, rate, in undercooled melts 2=23816
    Ni, electrodeposited, growth habits 4=23346
    Ni, epitaxially on NaCl cleaved in vac. 4=29070
    Ni films, by epitaxy 1=12664
    Ni, grain, with boundaries saturated with Ni–S liquid 4=10564
    Ni, from melt, substructures 3=1271
    Ni, plastic deform., recrystallization var. time, microscopic obs. 4=26604
    Ni, recrystallization, grain growth activ. energy 1=9108
    Ni, recrystallization temp. lowering, by zone refining 3=18263
    Ni, single-crystal films 2=8489
    Ni single crystal films, epitaxial growth 1=6318
    Ni whiskers, nucleation 0=16274
    Ni_5As_2, vapour grown with and without halogen 4=10543
    $NiBr_2$, spirals on platelets 4=26615
    Ni—Fe alloy films, by epitaxy 1=12664
    Ni—Fe(80/20) on CaF_2, orientation depend. on substrate temp. 1=9028
    $NiFe_2O_4$, flux growth by Czochralski method 3=16043
    Ni ferrite, growth orientation 1=6494
    Ni ferrite, single crystals, from molten Pb oxide 3=3270
    Ni ferrites, free and forced orientation, Verneuil methods 1=1374
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Ag—Pd alloys, Pd self-diffusion coeff. at 850°C and 896°C 4=9994
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Al, diffusion of Fe, Ni, Co, dislocation short-circuiting models 4=1506
Al, electrolytic self-diffusion 4=17439
Al, mobility, effective charge of Al ions 2=18609
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Al, self-diffusion, activation energy 0=20843
Al, self-diffusion, determ. by electrotransport meas. 4=28486
Al, self-diffusion at 500-570°C 1=14325
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Al in Al_2O_3 2=21056
Al, As, counterdiffusion in Cu 2=21058
Al, in Cr, during vacuum distillation 2=12936
Al, in Fe—Al alloys 1=14300
Al, in Fe—Al alloys, in d.c. field 1=15163
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Al, Sb diffusion, under elec. field 3=22830
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Ar, solid, self-diffusion coeff. 2=18595
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As in Ge, solid solubility det. 3=3342
As in Ge, thermoelectric meas. 1=17553
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As, in Si, 1100°-1350°C meas. 3=10689
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Au, substitutional impurities, thermal diffusion 4=17440
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Au, vacancies and divacancies 3=4863
Au, of Ag, surface 3=20232
Au, of Ag, surface effects 4=10603
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Au, in Cu, 360-500°C, meas. by elastic scatt. of protons
Au and Cu on Cu, surface diffusion 4=15487
Au, in Si, with and without d.c. field, temp. depend. 1=3756
Au, in Si, interstitial—substitutional equil. meas. 4=6878
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Au—Cd alloys, self-diffusion of components 1=14306
Au—In system, below 155.4°C 4=22618
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in Au—Pb evap. films, vacancy mechanism 3=20226
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B, in Si, concn-depend., calc. 4=9993
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B into Si, through Si oxide layer 3=8453
B, in Si, through SiO_2 layer, anomalous 3=17789
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Bi_2Te_3, Ag diffusion 2=18606
Bi_2Se_3, diffusion of Fe and Cd 0=6056
Bi_2Se_3, doping activation energy 3=8516
Bi_2Te_3, Cd diffusion and solubility 4=1507
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C, in Fe, grain-size effects 1=3683
C in Fe, mobility, rel. to pressure 3=20234
C, in α–Fe, during precipitation 0=15866
C in Fe, pressure influence on time of stay 1=6118
C in α-Fe, temp. var. 4=28488
C, in martensite, derivation of diffusion coeff. 0=15850
C film on Ni, Ni oxide diffusion rel. to temp. 2=4490
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C, in Ti, 1223-1923°K 4=1519
C, pyrolytic, of Th, activation energy 4=6869
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calcium aluminosilicate glasses, O diffusion 4=28610
$CaAl_2Si_4O_{12}.6H_2O$, Ca^{2+} and Si^{2+} differential exchange, self-diffusion coeffs., calc. 4=30572
CaF_2, pure, on annealing in O_2 and air 4=12787
CaF_2, of O_2 activation energy meas. 4=12786
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Cd, lattice and grain boundary diffusion 0=17975
Cd, migration on W surface 1=20693
Cd, mobility, effective charge of Cd ions 2=18609
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Cd, at Ag–AgCd interface, tracer study 0=1606
Cd, in AgBr, pure and Cd-doped 0=9916
Cd in CdS, meas. analysis 4=15485
Cd, in Cu, effect of additional Cd 2=21075
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Cd, in Ge, radioactive tracer method 0=553
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Cd^{115m} in Zn, anisotropic 3=17793
$CdGeAs_2$ 3=8518
CdS, decomposition products along dislocation lines, rel. to irradiation 4=9985
CdS, diffusion controlled evaporation 4=27389
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CdSe, diffusion of dopants, conduction mechanism study 1=12444
$CdSnAs_2$ 3=8518
CdTe, intercrystalline, 350-580°C 4=1508
Cd telluride, surface layer investigation 0=7937
Ce, in Fe, distrib. on crystallization 3=20229
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Co, diffusion in Sn crystals 2=605
Co in Ag, coeff. rel. to temp. 1=14317
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Co, in CoTe polycrystals 3=20221
Co^{60}, in Cu, mobility and effective charge 2=18597
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Co, in Mo–Ni alloys, plastic flow effects 1=14324
Co, of W, by electric current, 1100-1350°C 3=17782
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Cr in Mn, rel. to heating, 1200°-1350°C 2=23201
Cr ions in Ni–Cr under electric field 1=7596
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Cr, atomic diffusion in Ti-Cr system 0=20844
Cr–Fe alloys, components migration, in d.c. field 1=12655
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Cr–S–N system, reactive diffusion 1=14311
Cs^{137}, radioactive, in NaCl monocrystal 2=603
Cs through Ta hot wall in diode 2=11705
Cs vapour in porous Mo, rel. to Cs surface ionization 2=11623
CsBr, ionic, rel. to elec. conductivity, 300-550°C 0=9917
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Cu, rel. to coalescence of pores 1=4075
Cu, rel. to coalescence of pores 1=10276
Cu, creep at 1050°C, mechanism 1=20358
Cu, creep at 1050°C, mechanism 2=21435
Cu, in diamond, rel. to optimum impurity size 2=12450
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Cu, electric transfer 2=6374
Cu, electrical transport of Ag 4=20307
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Cu, migration of He-filled bubbles 4=30573
Cu, mobility, effective charge of Cu ions 2=18609
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Cu rods, brass-cored, mutual diffusion, effect of press., rel. to diffusion-induced porosity 4=15486
Cu, self-diffusion, dislocation blocks and grain growth 0=15855
Cu, self-diffusion energy 4=1455
Cu, self-diffusion, in healing of surface defects 0=6047
Cu, self-diffusion, role of divacancy migration 0=17958
Cu, self, surface, oxygen pressure, impurity effects 4=28487
Cu, substitutional impurities, thermal diffusion 4=17440
Cu, surface, rel. to defect self-healing 4=12744
Cu, surface-marker motion induced by current 2=2096
Cu^+, surface mobility on Cu_2O 1=3765
Cu, in a temp gradient 2=7444
Cu, vacancy migration, effect of impurity atom 2=3935
Cu, volume diffusion, under α-irradiation 1=14351
Cu, zone-refining of tracers 4=23336
Cu, in AlSb 0=9915
Cu, in Au crystals in boiling HCl 3=4888
Cu and Au on Cu, surface diffusion 4=15487
Cu, in Bi_2Te_3, anisotropic 0=11643
Cu, in BiTe, change of elec. props. 2=10484
Cu in CdS crystals 1=3684
Cu, in Cu_2O 2=14434
Cu, in GaAs, n-type, 575° to 750°C rel. to resistivity and energy levels 2=23384
Cu, in Ge, heat of soln. calc. 0=7863
Cu, in Ge, high-temp. mobility 1=987
Cu, Ge surface diffusion 4=22611
Cu, in Ge: Sb, high-temp. mobility, Cu–Sb interact. 1=987
Cu, H_2 diffusion 3=20220
Cu, in InSb, interstitial, mechanisms 3=17783
Cu, in Ni films, 200-630°C 2=6373
Cu, in Ni, by X-ray spectra of double layer 2=21053
Cu in Si, precipitation 1=10274
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Cu, Sb^{124} diffusion, 560°-896°C 4=22609
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Cu—Ni, alloy system, rel. to composition 3=6532
Cu—Ni interdiffusion coeff. mechanism 4=12789
Cu–Ni, mutual diffusion during sintering 0=12070
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- Cu—Zn alloy, f.c.c., torsional deform. 3=12999
- Cu—Zn alloys, mechanism of sulphitation 1=1439
- d in Al, by d + d → He^3 + n 3=17352
- D, in deuteron-irradiated Cu 0=13559
- D, in Ta, activation energy, d-irrad. effects 0=17979
- F^{19}, in $CaF_2 : Sm^{2+}$, n.m.r. narrowing 3=23271
- Fe, b.c.c. 4=25964
- Fe, diffusion growth of grains, in recrystallization 2=23888
- Fe and ferritic steels, of H, Fick's law modification 4=6873
- Fe films, from conductivity, electrical and activation energy 3=15538
- α-Fe, internal friction due to H and D 1=14305
- Fe, meteoritic, thermal diffusivity 3=11526
- Fe^{55}, other tracers, in b.c.c. transition metals 2=6375
- Fe, in oxidation of Armco iron 1=6112
- Fe, self, bulk and intercryst., effect of Ti, up to 1% wt. 3=22812
- Fe, self-diffusion 1=17556
- Fe, self-diffusion 2=6368
- Fe, self-diffusion in α, γ and δ phases 3=25290
- Fe, self-diffusion in α-Fe and γ-Fe 0=9919
- Fe, self-diffusion and diffusion of Cr 0=11638
- Fe, self-diffusion, in grain boundaries, impurity separation 0=17970
- α-Fe, self-diffusion in large temp. gradient 1=2393
- Fe, self diffusion above 1350°C 4=9988
- Fe, self-diffusion, creep rate, at sub-melting temp. 4=23164
- Fe, self-diffusion, effect of Sn and Sb additions 4=12794
- Fe, self-diffusion, effect of stress and deformation 1=10012
- Fe, self, frequency rather than activation as cause 4=1514
- Fe, self, no effect due to Ce 3=22813
- Fe, α, self, var. with plastic compression, 742-885°C 4=6874
- Fe, sintered α and γ phases, failure mechanisms 0=8126
- Fe, surface self-diffusion after vac. anneal. 3=13003
- α-Fe, thermal diffusion of carbon 1=3682
- γ-Fe, thermal diffusion of carbon 1=3682
- Fe, volume diffusion across oxide phase boundary rel. to oxidation rate 4=10635
- $Fe^{55,59}$, in Ag and Cu, isotope effect, comp. with theory 1=4993
- α-Fe, diff. of Au,Co,Ni, effect of ferromagnetism 3=22810
- Fe, in Be 2=12455
- Fe (carbonyl), 1110°-1240°K, by field-emission technique 2=14460
- Fe, Co, Ni in Ag, rel. to solubilities 3=13006
- δ-Fe, diff. of Co^{60} and Fe^{59} 3=22811
- Fe, Co and Ni, in Au, meas. 3=8449
- Fe, Cr in βU 3=10691
- Fe^{55} , in Cu, mobility and effective charge 2=18597
- Fe^{59} in γ-Fe self-diffusion coeff., grain size effect, radioactive tracer meas. 4=30581
- Fe, in Fe—Al alloys 1=14300
- Fe, in Fe—Al alloys, in d.c. field 1=15163
- Fe, in Fe—Al alloys, volume pressure effects, 1100-1250°C 1=11226
- Fe, in Fe—C, in d.c. field, temp. depend. 1=12657
- Fe, in Fe—Cr alloy, high-temp. plastic deformation 1=14309
- Fe in Fe—Cu alloys 1=17557
- Fe^{59} in α-Fe_2O_3 3=22807
- Fe in Ge 1=19802
- Fe, radioactive, in Ni, role of pores, impurities 2=12462
- Fe, in Ni, by X-ray spectra of double layer 2=21053
- Fe, Ni, Co, interdiffusion coeffs. in Al 2=21057
- Fe in Ni—Cr basis polycomponent alloy 3=20231
- Fe, P diffusion, radiometric study 4=20294
- Fe, α, γ, δ, of P, 1250-1350°C 4=17442
- Fe, of P, 700-890°C, alloying effects 4=20296
- α-Fe, sulphur diffusion to grain boundaries 1=3690-1
- Fe, in Si, 30°-85°C 3=13066
- $Fe^{55,59}$ in Ti and Ti—Nb alloys 3=20233
- Fe, in TiO_2, 950°-1050°C 2=6369
- in Fe, of solid and liq. Zn, inert-marker technique 4=1515
- Fe—Al alloys, self-diffusion in elec. field, radioactive tracer study 4=25968
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- Fe—C solid solns., diffusion after-effects 0=13819
- Fe—Ce, Fe self-diffusion, Ce content depend. 4=12793
- Fe—Mg alloys, Fe self-diffusion, rel. to small Mg additions 4=15490
- Fe—Mo alloys, components migration, in d.c. field 1=12655
- Fe—Mo—C, Fe^{59} diffusion, differential γ-ray meas. 4=12779
- FeO electrolysis, ~ 1000°C 4=29227
- Fe_2O_3 on porcelain surface, thermal 4=30577
- Fe_3O_4, measurement 1=6113
- Fe—Si alloys, boundary migration 0=20828-9
- Fe—V alloy, self-diffusion, temp. depend., ferromag. spin ordering 1=2392
- Fe—W alloys, W migration, in d.c. field 1=12655
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- GaAs Esaki diode, interstitial, rel. to deterioration 4=26078
- GaAs injection lasers, diffusion problems 4=22613
- GaAs junctions, prep. by Zn and Sn double diffusion 4=26069
- GaAs, self-diffusion and diffusion of Cd, Zn, S, Se 1=4991
- GaAs, stress effects of doping with Se, Te, Zn and Cd 4=26045
- GaAs, Ag diffusion 4=1512
- GaAs, Cd diffusion, rel. to dislocations 4=9986
- GaAs, of Cd, In, interstitial—vacancy mechanism 4=12792
- GaAs to GaP, by solid-state diffusion 2=21064
- GaAs, Li diffusion, Hall effect meas. 4=15537
- GaAs, S, Se and Te diffusion, n—p junction formation 4=17441
- GaAs with SiO_2 films, Zn diffusion 4=22616
- GaAs, Zn and Cd diffusion, rel. to surface masking 3=25289
- GaAs, Zn diffusion, to achieve low surface concs. 4=22614
- GaAs, Zn diffusion, mechanism 4=4071
- GaP, Zn diffusion and solubility 3=10686
- GaSb, diffusion of O 1=17712
- Ga, in Si, vacancy mechanism, irradiation effect 2=12458
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- Ge, diffused juncn. depletion layer calculations 0=11696
- Ge, dislocations effect 4=25961
- Ge, rel. to distribution coefficients and impurities in liquid and solid 4=15488
- in Ge, impurity diffusion, mechanism 3=20222
- Ge, interstitial impurities, mechanism 2=12452
- Ge, profile in etching, meas., from corrosion pot., n-type 3=20228
- Ge, self-diffusion, effect of dislocations 2=3940
- Ge, single-crystal, hydrogen diffusion 1=7597
- Ge, small diffusion depths meas. method 2=16703
- Ge, surface effects 2=23203
- Ge tunnel-diode junctions, impurity drift 3=20362
- Ge, vacancies, during quenching, calc. 2=21076
- Ge, diffusion of Ag, In, Zn and Te 2=12453
- Ge, As and Sb diffusion 0=2829
- Ge, Cu diffusion, 500-680°C 0=2872
- Ge^{71}, in Ge, self-diffusion 2=2093
- Ge, of He 4=28490
- Ge, O diffusion, i. r. absorpt. band, dominant, stress-induced dichroism meas. 4=28485
- Ge, Sb diffusion, rel. to local electric fields, 750°-900°C 4=6871
- Ge, diffusion of Sb and As, rel. to Sb and As surface concs. 4=30574
- Ge, Sb or In diffusion, dislocations effects 4=1511
- Ge—Si system, heterodiffusion, electron-diffraction study 3=22808
- Ge with Sn, disloc., effect on boundary 4=25962
- GeO_2, of O^{18} 3=20224
- H, in Au, diffusion coeffs. 2=14459
- H, in Ba getters 2=5086
- H and vacancies, in Cu 3=15481
- H, in Fe and Pd electrodes, overvoltage study 0=8309
- H and D in fused quartz 2=6366
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- H in metals, permeation 400° to 900°C 2=12457
- H in Mg—0.6% wt Zr alloy, ZrH precipitation 2=4515
- H in Mo, yield and flow stress 2=6737
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hydrogen—deuterium in fused silica, i.r. study 1=1475
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H_2, in mild steel cylinders at 65°C, deviation from Fick's laws 1=990
H_2, in Ni, effect of plastic deformation 0=15869
H_2, in Pd 0=12069
H_2 in Pd, mass spectrometry 3=2829
H_2, in rolling surfaces with water-accelerated fatigue 3=25644
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He, in fused quartz 1=3685
He, in Vycor glass 0=5051
He^3, β-phase, rel. to nuc. mag. relaxation 4=14505
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αHe^3, self-diffusion, rel. to lattice defects 3=8422
He^3, solid, self-diffusion meas. 3=5574
He^3 in Ti, temp. depend. 1=10011
Hf, O_2 diffusion, 800° and 950°C 4=6872
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HgTe, intercrystalline, 350-580°C 4=1508
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In, in p-type CdTe, meas. 3=22806
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In, in GaSb, elec. props. depend. 0=4359
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In, in surface of Ge 2=8244
In, in Ge, under const. elec. current 1=14307
In, in Ge, n-type, controlled process 0=15933
In, in Mg, film, superimposed and film superconductivity 3=22805
In^{114}, in Zn single crystals, anisotropy 2=2101
InP, self-diffusion 1=4991
InSb, diffusion of impurities 4=4075
InSb, excess carrier coeffs., 130°K 4=30537
InSb films, of In and Sb, rel. to elec. props. 4=20808
K crystals, K atom surface diff. 3=25291
K, surface diffusion effects in growth 0=18309
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K and Cl, on surface of KCl 1=17562
K, in Pt, thermionic emission study 0=6061
KBr, diff. of thallous ions 2=10412
KBr:Tl, colour centres, in K vapour 2=3956
KCl, additively coloured, diffusion and reaction of H_2O 4=17445
KCl, diffusion of Cl ion 1=14323
KCl, F-centre diffusion into crystals during additive colouring 0=20838
KCl, F-centres, effect of dislocations 2=3964
KCl, Na^{22} and Na^{24} diffusion 2=14468
KCl—KBr, mixed crystal formation 3=13004
Kr, fission-produced, in metallic U 0=11645
Kr, from irradiated U_3O_8 0=15620
Kr^{85}, in quartz, in phase transformation meas. 2=4361
Kr^{85}, in ThO_2 2=14461
Kr^{85}, in $UO_{2.0}$, $UO_{2.12}$ and U_3O_8 0=4308
Kr in U, evolution 1=19570
La—H system, proton self-diffusion 3=20671
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Li ions, across p—n junction 2=14469
Li self-diffusion coeff. 2=19150
Li, self-diffusion, pressure depend. to 7000 atm 2=10415
Li, self-diffusion at 630°C 0=11496
Li, in vitreous silica, isotopic separation 1=13972
Li in GaAs, rel. to acceptors 3=17877
Li, in GaAs, elec. props. and chem. study 2=18598-9
Li, in Li_2SO_4 1=19803
Li, in Si 0=4302, 6103, 13560-1
Li^+, in Si, drift mobility, LiO^+ dissociation const. 1=11301
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$Li^{6,7}$, in W, polycrystalline 0=17976
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LiBr, spin-lattice relaxation due to translational diffusion 3=18143
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Li_2SO_4. H_2O, proton mobilities from dielec. props. 4=28480
Mg of Ag^{110}, ion mobility, d.c., and scatt. 3=22831
Mg, film, of In backing, and film superconductivity 3=22805
Mg in Mg—Ni alloy at 1119°K 6=14464
Mg, in cathode Ni, heated in reducing atmos. 1=3686
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Mg_3Cd, of Cd, temp. var., ordering effects 4=4076
MgO, of Co, Ni cations, grain boundary, 1350°C 4=20299
MgO, Ni^{2+} grain-boundary diffusion 4=20300
Mg—1/2 wt. % Zr alloy, rel. to grain-boundary denuded zones 3=16116
Mg—Zr alloys, directional diffusion 4=12796
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Mn^{54}, in Al, 450°-650°C 2=12448
Mn in Ca and Sr fluorides, by e.s.r. 2=10409
Mn, in NaCl. $MnCl_2$ and NaCl crystals 2=21070
Mn, in NaCl+$MnCl_2$ and NaCl crystals 3=6535
Mn, in Ni_3Mn 0=4700
Mn in Ti 1=17552
Mn—Fe(81%), of H heat treatment effect, and mech. tensile props. 4=20670
MnO_2, of O_2, > 100°C 4=20823
Mo, self-diffusion meas. rel. to temp. 2=6371
Mo, self-diffusion in single and polycryst. 3=17787
Mo, reactive diffusion in BCl_3 + $SiCl_4$ + H_2 atoms. 4=28489
Mo, diffusion of Co^{60} 2=14463
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Bi_2Te_3, at 300°K 2=8702, 10733
C, glassy and baked, var. with strain amplitude, temp., neutron effects 4=10380
C, polycrystalline, small-strain model 4=23132
C, Young's modulus at high temperatures 4=23131
C steel, stress meas. by X-ray method 4=23097
CO_2, solid, u.s. meas. 0=11965
$CaCo_3$ 2=21390
$CaCO_3$, from velo., u.s. 3=23278
CaF_2 3=18161
CaF_2, calc., closed-shell ion-ion interactions 2=16588
CaF_2, 4-300°K 0=6018
$CaMg_2$ single crystals 2=14868
β-CaZn alloy, 4·2-800°K 3=8752
Cd, 4. 2-300°K 0=13898
Cd pyroniobate, rel. to piezoelectric props. and temp. 4=4459
CdS 0=16027, 21094
CdS, hexagonal, anisotropy and Cauchy relations 1=20299
CdS, hexagonal single crystal 1=20292
CdS, meas. and model 3=8556
CdS, sphalerite form 3=18159
CdSe, meas. and model 3=8556
CdTe, meas. and model 3=8556
CdTe, at 25°C, by u.s. methods 2=2313
Ce, at high pressures 1=3957
Ce, at high pressures 1=10205
Co, effect on magnetic sp. ht. det. 4=25856
Co, free-centre cubic 0=6291
CoFe ferrite, depend. on temp. and mag. orientation, theory 1=9030
CoO, temp. var., anomalies 3=6774
$CoSO_4.7H_2O$, and crystal structure 3=20690
Co—W, during phase transformations 4=17727
Cr, effect of O_2 impurity 1=14853
Cr, results from diffuse X-ray and u.s. techniques 3=23285
Cr, temp. depend., anomalies 3=8753
Cr, Young's, ~ 40°C, effect of thermal and mech. history 4=26501
Cr alloys with Fe, Zr, Be 1=14853
Cr_3C_2—Ni, modulus, dependence on concentration of Ni 1=11500
Cr ferrite, alloyed with various metals, temp. depend. 3=20900
Cr—Ni alloy, effect of temp. and W and Mo admixtures 1=20308
Cr_2O_3, temp. var., anomalies 3=6774

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CsBr, 4.2-300°K 1=1294
CsBr, room temp. to 4.2°K 4=15702
CsBr, 73-300°K, from u.s. velocity 1=12583
CsBr, single crystals, temp. depend. 4=1932
CsBr at 300°, 77°, 4.2°K 3=21501
CsCl-type crystals, elastic and thermoelastic constants 1=20293
CsCl-type crystals, third order 4=1933
CsI, room temp. to 4.2°K 4=15702
CsI, 73-300°K, from u.s. velocity 1=12583
CsI, single crystals, temp. depend. 4=1932
Cu 0=15827
Cu, cold worked, dynamic moduli meas. 4=1941
Cu, cold-worked, irradiated and unirradiated specimens 2=6744
Cu, dislocation contribution 0=3154
Cu, dynamic moduli, 4°-300°K, after deformation 3=25613
Cu, effect of electron irrad. 3=796
Cu, effect of interstitial atoms 2=16643
Cu, effect of neutron irrad. 3=5059
Cu, elastic regions near zero applied stress 4=10375
Cu, elastic and shear moduli 4=17707
Cu, electrodeposited thin-walled tubes 1=5079
Cu, Mc/s range, 4.2-250°K, dislocation damping 1=3955
Cu, modulus changes after deformation at 4.2-78°K 2=18981
Cu, neutron bombard. 0=8103
Cu, 99.99% pure, elastic modulus, electrocapillary effect 4=4438
Cu, after plastic deformation at 4·2° K 3=8757
Cu, recovery after plastic deform., dislocation effects 4=20651
Cu, third-order constants, tabular data 1=2501
Cu, variation with hydrostatic pressure 1=2503
Cu, Young's, beta ray effects, low temps. 4=10376
Cu, Young's modulus, effect of electron irradiation 0=6294
Cu—Ag, from u.s. velo., wedge method 3=23276
Cu—Ag, Cu—Sn, Cu—Zn alloys, effect of Pb addition 4=28964
Cu—Au alloys, rel. to ordering 3=20685
Cu—Au, from u.s. velo., wedge method 3=23276
Cu_3Au, ordered and disordered, 4·2-300°K 1=20294
Cu_3Au, rel. to increase of Debye temp. 1=11255
Cu_3Au, Young's modulus rel. to ordering 4=7488
Cu—Mn alloy, Young's modulus, effect of thermal ageing 1=1297
Cu—Ni alloys 1=1289
Cu—Ni, from u.s. velo., wedge method 3=23276
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Cu—Sb, rel. to composition 4=23158
Dy, temp. depend. 2=744
Dy, temp. depend. 3=5017
Dy, temp, var. 3=6711
Armco iron, elastic—plastic props. 3=9540
Fe, α, and Debye temp., effect of alloying with Mn, Mo, Si, C 4=6750
Fe, rel. to dislocation damping 2=21405
Fe, effect on magnetic sp. ht. det. 4=25856
Fe foils, rel. to dislocation movement 3=17702
Fe, 4.2-300°K, by u.s. pulse technique 1=10203
Fe, pressure depend., up to 10^4 kg/cm^2 2=23733-4
Fe, shear modulus, rel. to deform amplitude 3=6779
Fe, sintered, meas. 2=16945
Fe, third-order constants, tabular data 1=2501
Fe, variation with hydrostatic pressure 1=2503
Fe—Al alloy, rel. to atomic order and ferromag. props. 3=25605
Fe—Al alloys, rel. to quenching temp. 2=6715
Fe Al, Young's effect of degree of order 2=4308
Fe_3Al, Young's modulus, effect of order 2=4308
Fe-base alloys, Young's modulus rel. to Ni and Co content and temp. 4=17736
Fe—Co—Cr alloy, ferromag. anomaly, temp. depend. 2=23732
Fe—Ni alloys, ΔE effect 1=1299
Fe—Ni (70/30), changes on heat treatment, u.s. detection 1=7813
Fe-Ni alloys, magnetic contribution 0=11874
Fe—Ni—Cr alloy, ferromag. anomaly, temp. depend. 2=23732

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Fe—Ni—Mo alloys, Young's modulus rel. to Mo content 4=17737
α-Fe_2O_3, effects of temp. and mag. field 2=6714
α-Fe_2O_3, magnetoelasticity 3=25523
Fe_3Pt alloy, Young's modulus anomaly at Curie point (71°C) 0=11972
Fe-Rh alloy, Young's modulus 4=26314
FeS_2, by thermal agitation 2=10731
$FeSO_4.7H_2O$, and crystal structure 3=20690
α-Fe—W, Young's mod., W-conc. depend. 1=4060
Ga, temp. depend. 2=744
Ga, temp. depend. 3=5017
GaAs, low-temp., from u.s. waves meas. 2=18977
GaSb 3=8751
GaSb single crystals, c.w. resonance technique 0=13897
Ge 1=17399
Ge, effect of holes, calc., 3=20689
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Ge, third-order constants, tabular data 1=2501
Ge, third-order moduli 1=7810
Ge, u.s. interferometry, temp. depend. 0=1843
GeO_2, Young's modulus, temp. depend. —195 to 540°C 0=13900
Hf, single crystal moduli, 4° to 1155°K 4=26530
In, normal and superconducting, identity 1=2923
In, 1·4-300°K 1=20295
InAs, adiabatic, room-temperature 4=4468
K, calc. using Toya's electron—phonon interact. 4=20196
K tartrate, u.s. pulse meas. 0=13896
KBr, by diffuse X-ray reflection 4=1963
KBr, temp. depend., polycryst.—cryst. relation 2=12841
KBr, ultrasonic results 1=901
KCl, adiabatic, 300°K to melting pt. 0=16207
KCl, by diffuse X-ray reflection 4=1963
KCl, effect of pressure on shear modulus 1=11271
KCl, rel. to temperature 3=18163
KCl, temp. depend., polycryst.—cryst. relation 2=12841
KCl, temp. dependence 0=11968
KCl, ultrasonic results 1=901
KD_2PO_4, compliance 3=17943
KI, anisotropy, 20-550°C 0=16205
KI crystals, temp. depend. 2=8701, 10732
KI, -183° to 300° C 4=7450
Li, dislocation contrib., calc. 2=16943
$Li^{6,7}$, elastic modulus, no isotopic mass effect 0=4553
Li, elasticity modulus rel. to plastic deformation 4=10431
Li, shear constants, effect of pressure 1=11503
Li single crystal, from X-ray scattering 0=13984
Li, use in vibr. spectrum and specific heat calc. 2=16592
LiF, amplitude dependence 2=21408
LiF, cohesive forces 0=18237
LiF, as function of temp. and pressure 1=14848
LiF, single crystal, temp. dependence 1=20303
LiF, single crystal, temp. dependence 2-8705
LiF, ultrasonic results 1=901
Li ferrite-chromites, Young's modulus, anomalies 3=5061
$LiH_3(SeO_3)_2$ 3=10881
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Li—Mg alloys, rel. to martensitic transform. 3=5125
Mg, and lattice vibr. spectrum 3=10578
Mg, pressure depend., up to 10^4 kg/cm^2 2=23733-4
Mg alloys, rel. to electron energy structure 1=20296
Mg_3Cd, and ordering kinetics 4=1995
$Mg(H_2O)_6(BrO_3)_2$ 3=18161
MgO, cohesive forces 0=18237
MgO, comparison with theory 4=7434
MgO, as function of temp. and pressure 1=14848
MgO, mono- and polycryst., kc/s meas. 3=15971
MgO, polycryst., rel. to single-crystal data 4=13426
MgO, Young's modulus, exponential temp. depend., 77-850°K 1=10204
$MgSO_4.7H_2O$, and crystal structure 3=20690
$MgSO_4.7H_2O$, crystals, temp. depend. 0=11749
Mn dilute alloys in Cu 1=9081
MnO, temp. var., anomalies 3=6774
MnS_2, by thermal agitation 2=10731
Mo, 4.2°-300°K meas. 3=13325
Mo, pressure depend., up to 10^4 kg/cm^2 2=23733-4

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Mo, at 77-500°K 2=14869
$N_2H_6Cl_2$ 3=18161
NH_4Cl, near λ-point 4=7410
NH_4Cl, temp. depend., polycryst.-cryst. relation 2=12841
$NH_4H_2PO_4$ (ADP). adiabatic values 1=20291
$NH_4H_2PO_4$ (ADP), rel. to Laval theory 1=6444
ammonium dihydrogen phosphate, shear wave velocities 2=16949, 18987
Na, press. depend. 0=13904
NaCl, amplitude dependence 2=21408
NaCl crystals 0=6306
NaCl, effect of pressure on shear modulus 1=11271
NaCl, γ-irrad., rel. to dislocation pinning 2=21404
NaCl, increase in visible light due to dislocation pinning 2=21035
NaCl, rel. to point defect "background" 3=17757
NaCl single crystals, c_{111}, u.s.-optical determ. 4=26528
NaCl, temp. depend., polycryst.-cryst. relation 2=12841
NaCl-type crystals 1=19690
NaCl-type crystals 2=8151
NaCl type crystals, third order, temp. depend., calc. 3=18164
NaCl, ultrasonic results 1=901
NaCl whiskers 3=20804
NaCl, Young's modulus, rel. to internal friction 1=20307
NaF, by diffuse X-ray reflection 4=1963
NaF, rel. to temperature 3=18163
NaI, 4.2-300°K 0=17895
$NaNO_2$ 4=20716
$NaNO_2$ single crystals 3=10885
Na thiosulphate, ultrasonic velocities cal. 2=4305
Nb, single crystals, 27°C 1=3954
Nb, u.s. meas. 4=28977
Nb, Young's modulus, temp. variation 1=2504
16% Nb-Zr alloy, 475° - 575°C, rel. to β→ w transform. 4=23281
Nb-Zr alloys, Young's modulus 0=8105
Ni amorphous films 1=5078
Ni, effect of annealing in moist H_2 3=20722
Ni, effect on magnetic sp. ht. det. 4=25856
Ni electrodeposited coatings, elastic modulus variations 4=23181
Ni, magnetic contribution 0=11874
Ni, magnetoelastic consts., calc. 1=17969
Ni, magnetomechanical change, anisotropy 2=4230
Ni, rigidity modulus rel. to work hardening coeff., theory 4=10587
Ni, shear modulus, rel. to deform. amplitude 3=6779
Ni, shear modulus, effect of mag. field 3=11141
Ni, shear modulus, temp. var. 3=3209
Ni, Young's mod., rel. to internal friction 0=11971
Ni-Al alloys, rel. to composition, heat treatment 2=23735
Ni alloys, binary, effect of temp. and composition 1=20305
Ni alloys, high, from u.s. velo., wedge method 3=23277
Ni-base alloys, Young's modulus variation during heat treatment 0=6292
Ni-Cr alloys, rel. to composition, heat treatment 2=23735
Ni-Cr-Al alloys, rel. to composition, heat treatment 2=23735
Ni-Cr-Ti alloys, rel. to composition, heat treatment 2=23735
Ni—Cu alloy, 1-5 Mc/s 4=20676
Ni—Fe alloy, 1-5 Mc/s 4=20676
Ni-Fe ferromag. alloy, meas. at 300°K 4=7442
Ni—Fe, magnetomechanical change, anisotropy 2=4230
Ni—Fe, temp. depend. and anisotropy 3=18075
Ni ferrite, modulus rel. to mag. fld. and frequency 4=23186
Ni-Mo alloys, rel. to composition, heat treatment 2=23735
$Ni(NH_3)_6(NO_3)_2$ 3=18161
NiO, Young's modulus, mag. field depend. 0=11918
$NiSO_4.7H_2O$, and crystal structure 3=20690
Ni-Span C-type alloy, mech. Q-factor rel. to heat treatment 2=12844
Ni-Ti alloys, rel. to composition, heat treatment 2=23735
Ni-Zn ferrite 3=17652
NiZn ferrite, Young's mod. rel. to internal friction 0=11971
Pb, dislocation contribution 0=3154
Pb, at low temp., rel. to Debye temp. 3=1212
$PbMg_{\frac{1}{2}}W_{\frac{1}{2}}O_3$, yield anomaly, near antiferroelectric Curie point 4=1953
$Pb(NO_3)_2$ 3=18161
$Pb(NO_3)_2$ wedge method 1=20284

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$Pb_{0.95}Sr_{0.05}(Zr_{0.53}Ti_{0.47})O_3-Ta_2O_5$ 4=1909
PbTe 3=8751
PbTe monocrystals 2=18525
lead titinate zirconate 4=15563
Pd, 4.2-300°K 0=11966
α-Pu, in compression 3=25602
α-Pu, Young, 4.2-300°K, and mag. transition ~ 55°K 3=20691
Pu—Al alloys, Young's modulus, determ. for phase boundary position calc. 4=13440
Pu—Ce alloys, Young's modulus, determ. for phase boundary position calc. 4=13440
RbBr, 300°K, from u.s. velocity 1=12583
RbCl, effect of pressure on shear modulus 1=11271
RbI, 300°K, from u.s. velocity 1=12583
Sb, rel. to lattice vibrations 4=9826
Se, amorphous, G and Q changes on irradiation 1=14849
Se, amorphous, G and Q changes on irradiation 1=20306
Si 1=17399
Si, electronic effect 3=18162
Si, monocrystals, irradiated by fast neutrons 1=9082
SiC 3=18160
SiO_2 glass, effect of fast-neutron irrad. 3=13330
Sn, dependence on temp. 0=6295
β-Sn, 4.2-300°K 1=1293
Sn single crystals, temp. depend. 0=10255
Sn-Ag, Sn-Zn, Sn-Sb, rel. to composition 4=23217
Sr, shear const. temp. depend. 3=1216
Sr formate, simple and dihydrate, u.s. meas. 3=23281
$Sr(NO_3)_2$ 3=18161
$Sr(NO_3)_2$ wedge method 1=20284
$SrTiO_3$, rel. to lattice dynamics 2=16589
$SrTiO_3$, rel. to phase transition and elec. field 3=5055
$SrTiO_3$, from sound velocity meas. 3=13332
Ta, 4.2°-300°K meas. 3=13325
Ta, single crystals, 27°C 1=3954
Ta, u.s. meas. 4=28977
Te, force consts., determ. 4=1367
Te, 100°-300°K, u.s. echo meas. 4=10402
Te, 6 consts. 4=4489
Te, u.s. echo technique 4=4489
Th, Young's modulus, temp. variation 1=2504
ThO_2 polycrystals, effect of porosity 3=13331
ThO_2, Young's modulus, exponential temp. depend., 77-850°K 1=10204
Th_2O, of porosity, temp. depend. 3=23283
Ti alloys, variation with temp. 0=4552
Ti, single crystal moduli, 4° to 1155°K 4=26530
TiB_2, acoustic measurement 1=11501
Ti-B-Al alloys 3=11132
TiC, acoustic measurement 1=11501
Ti—Mo (0-35%), Young, shear, and phase transforms. 4=1964
Ti—Nb alloys, composition depend. 4=26531
Ti—Nb(0-60%), Young, shear, and phase transforms. 4=1964
TiO_2, rutile, meas. in k/cs range 3=6772
Ti—V (0-50%), Young, shear, and phase transforms. 4=1964
Tl, hexagonal, 4.2-300°K range 3=11134
U, α-phase, rel. to lattice dynamics 1=11145
U, phase transition in α-type at 42°K 1=15135
α-U, single crystal, adiabatic elastic moduli, temp. depend. 0=16204
U alloys, Young's modulus, temp. variation 1=2504
uranium monocarbide 1=5953
UC, by pulse-echo technique 3=25599
UCd_{11} 4=23223
V, 4.2-300°K 0=16200
V, single crystals, 27°C 1=3954
V, Young's modulus, temp. variation 1=2504
W, cast, effect of recryst. anneal 3=11183
W, 4.2°-300°K meas. 3=13325
W, 14°-300°K 0=21103
W, at 77°-500°K 2=14869
W wire, shear modulus, temp. depend. 3=13329
W, Young's modulus, deuteron irrad. effects 2=12842
WC-Co(10%), anisotropy, from X-rays 3=6775
WC, Co-bonded, adiabatic elastic moduli 1=1292
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ZnO, single crystals 3=1213
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ZnS, meas. and model 3=8556
ZnS-type crystals 1=899
ZnS, variation with temperature 4=13450
ZnS wedge method 1=20284
ZnS, wurtzite form 3=18159
$ZnSO_4.7H_2O$, and crystal structure 3=20690
Zn−Sb, rel. to composition 4=23158
ZnSe, meas. and model 3=8556
ZnTe, meas. and model 3=8556
α-Zr, adiabatic, from u.s. wave velocity 2=4306
Zr and alloys, data manual 2=22875
Zr, 14-300°K 0=21103
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polymers, resonant flexure method 4=20678
polymers, shear modulus, complex 4=15714
polymers, solid, dynamic mechanical props. 2=18980
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Pyrex, from shear-wave vels. 3=9527
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trigonal crystals, calc. from u.s. meas. 2=10728
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Vinidur, elasticity modulus, using double pendulum 4=7363
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Electrons

This heading includes both negative and positive electrons when the differences between them are of no special significance. See also Beta rays; Cosmic rays, electrons; Crystals, electron states; Fluctuations, electrical; Nuclear reactions, electrons; Photoelectricity; Plasma; Positronium; Positrons; Space charge.

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$Ar^{41} \to K^{41}$ 0=4030
As^{70} 1=13748
As^{70} 3=12624
As^{74} 0=15559
As^{74} 1=10995
As^{74} 2=16321
As^{75} (n, γ) thermal neutron capture reaction 1=7383
$As^{75}(p,n)Se^{75}$ 1=9862
As^{76} 0=4065
As^{78} 0=4064
As^{79} 1=13747
As^{79} 2=3505
$As^{80} \to Se^{80}$ 0=5697
Au, electron pair annihilation in, line breadth 0=11558
Au, neutron capture, 15-300 keV 3=6266
from Au (n,γ) 1=4870
Au(n, γ), resonance neutron capture 4=6363
Au(p, γ) 0=7557
Au(p,γ) 10-14 MeV 1=9858
Au^{194} 0=7523
Au^{194} decay to Pt^{194} 4=27982
$Au^{194,196,198}$, from conversion lines 0=20403
Au^{196} 0=17556
$Au^{196} \to Pt^{196}$ 1=13739
Au^{196m} 0=17521, 20413
Au^{197}, 191 keV transition 1=8665
Au^{197}, Zeeman effect in Fe, Co and Ni 4=9811
Au^{197m} 2=18271
Au^{198} 1=12182
Au^{198}, after capture of neutrons by Au^{197} 1=12153
Au^{198} decay, β—γ correl. 3=6204
Au^{199} 1=12182
Au^{199} 3=658
Au^{199} 3=12643
Au^{199}, rel. to energy levels 4=15169
Au^{200} 0=4071
B, proton bombardment 1=19473
B^{10} 0=13133
B^{10} 1=7322

Gamma-ray spectra—contd
B^{10}, cascades, branching ratios 2=417
B^{10}, e.m. transitions, by mag. pair spectrometer 4=1008
$B^{10}(d, n\gamma)C^{11}$, rel. to C^{11} energy levels 0=20455
$B^{10}(d,n\gamma)C^{11}$, low levels in C^{11} 1=8587
$B^{10}(d, p\gamma)B^{11}$ polarization 1=19519
$B^{10}(He^3, p\gamma)C^{12}$ 2=1928
$B^{10}(He^3, p)C^{12}$, (p, γ, γ) coincidences, 9.0 MeV level in C^{12} 0=17558
$B^{10}(p,\gamma)C^{11}$, 1.14 MeV resonance 1=9856
B^{11} 1=19532
B^{11}, rel. to energy levels 1=10964
B^{11}, $C^{11,12}$ 2=1870
$B^{11}(p,\gamma)C^{12}$ 1=13792
B^{11}, from C^{12} (n, np) and C^{12} (p, 2p) reactions 2=18318
B^{11}, from $Li^7(\alpha, \gamma)B^{11}$ 0=20467
B^{11}, N^{14}, F^{19} reactions on light nuclei, induced transfer 4=22209
$B^{11,12,13}$ excited state decay 4=22217
B^{12} de-excitation after $B^{11}(d, p)B^{12}$ 3=4664
Ba^{133} 0=13170, 17540
Ba^{133} decay, γ—γ directional correl. meas. 4=22073
Ba^{134} 3=15114
Ba^{134}, γ–γ directional correl. 4=9408
$Ba^{135m,137m}$ 2=18271
Ba^{136} 3=4572
Ba^{136}, γ–γ correl. 2=10009
Ba^{139} 0=20410
Ba^{139} 1=7341
Ba^{140} 0=4054
Ba^{140} and β-ray spectra 3=8039
Ba^{141} 1=7342
Ba^{141-2} 2=18291
Be, meas., after Be + n interaction 4=12133
Be(n, γ) 2=5939
Be, proton bombardment 1=19473
Be–p at 23.1 GeV 2=9840
Be^7 meas., by electronic subtraction. 3=25905
Be^6 0=20444
Be^8 1=635
from Be^9 deuteron bombardment, 2-5.6 MeV 1=2236
$Be^9(\alpha, n)C^{12}$, (γ, n) ang. corr. 1=19527
$Be^9(\alpha, n\gamma)C^{12}$ reaction 2=16316
$Be^9(d, n\gamma)B^{10}$ 2=20669
$Be^9(d, p\gamma)Be^{10}$ 2=3605
$Be^9(d, p\gamma)Be^{10}$, 13.6 MeV 4=9553
$Be^9(He^3,\gamma)C^{12}$, 1.5 to 4.5 MeV 4=22185
$Be^9(n, t')Li^{7*} \to Li^7 + \gamma$ 0=20490
$Be^9(p, \gamma)B^{10}$, excitation functions leading to states of B^{10} 0=1404
$Be^9(p, \gamma)B^{10}$, resonances 2=16315
$Be^9(p, \gamma)B^{10}$, 336 keV resonance 3=667
$Be^9(p,\gamma)B^{10}$, 6.8 MeV γ-ray yield, interference between 930 and 980 keV levels 1=9857
Be^{10}, e.m. transitions, by mag. pair spectrometer 4=1008
Be^{10} excited state decay 4=22217
Be^{10}, two-parameter analysis 3=19767
Be^{11-13}, two-parameter analysis 3=19767
Bi^{200}(n, γ) 0=459
Bi^{205} 4=3621
Bi^{205-6} 0=5719
Bi^{208m} 1=19496
Bi^{209}, α-ray excited, E2 transition rates 2=8009
Bi^{209}, on neutron scatt., inelastic, 2.95 MeV 3=8106
Bi^{211} 1=13746
Bi^{212} 0=17546
Bi^{212} 1=17039
Bi^{212} (ThC) 1=2186
Bi^{214}, (RaC) 3=8054
Br^{75} 2=3518
Br^{76} 0=4066
Br^{77} 0=4068
Br^{78} 0=13174
Br^{78} 1=10995
Br^{78} decay 1=8630
Br^{79m} 2=18271
Br^{80} 2=10071
Br^{81} 1=13756
Br^{81} 3=2406
Br^{83} 1=13748

Gamma-ray spectra—contd
Br^{83} 3=19817
Br^{86} 2=18289
C, meas., after C + n interaction 4=12133
C(C^{12}), at 9-29 MeV 0=13251
C(n,γ) 2=5939
C (n, γ), 2-11 MeV 1=17114
C(p,γ) 10-14 MeV 1=9858
C, proton bombardment 1=19473
C–p, 24 GeV 2=12192
C^{11}, from C^{12}(p, n)C^{11} 0=20440-1
C^{11}, from C^{12}(p,pn) reaction 2=18318
C^{12}, excited by proton scattering 1=5906
C^{12}, from inelastic neutron scatt. 0=4116
C^{12}, 9.63 MeV state 2=1799
C^{12}, 16.11 MeV state, partial widths 2=367
C^{12}(α,γ), (α,γ',γ), 2.8-8.3 MeV 4=30356
C^{12}[Mg^{24}] ($\alpha,\alpha'\gamma$), rel. to nuclear polarization 4=28062
C^{12}(C^{12}, $\alpha\gamma$) Ne^{2}, correlation with γ-rays at 0° 2=1933
C^{12}(p,γ)N^{13} 3=12666
C^{12}(p,γ_0)N^{13} 3=12666
C^{12}(p,γ)N^{13}, 1.5 to 2.0 MeV 3=17465
C^{12}(p, γ)N^{13}, 10 to 55 MeV 3=19846
C^{12}(p,p'γ)C^{12} at 15.1 MeV 2=1880
C^{12}(p,p'γ), 147 MeV, ang. correl. 4=22124
C^{12}, by proton inelastic scatt. at 150 MeV 1=8723
C^{12}, proton inelastic scattering at 150 MeV, ang. correlation 2=1872
C^{13} 2=16319
C^{13}, first three levels to ground state 1=13844
C^{13}, inelastic proton scatt., 3.8-4.5 MeV 0=17499
C^{13}, rare E2 transition 0=20406
C^{13}(α,nγ)O^{16}, excitation function 3=10390
C^{13}(He^{3}, α) C^{12}, correlation with α-rays 1=19525
C^{13}(p, γ) N^{14} 2=6323
C^{13}(p,γ)N^{14}, at 100-140 keV 1=2211
C^{14}, e.m. transitions, by mag. pair spectrometer 4=1009
Ca (n, γ), 2-11 MeV 1=17114
Ca(p,γ) 10-14 MeV 1=9858
Ca^{39}, branching study 0=13181
Ca^{40} 2=1873
Ca^{40}($\alpha,\alpha'\gamma$) 2=20510
Ca^{40}(γ,p)K^{39} up to 22 MeV 2=10085
Ca^{40}, two-photon de-excitation, monopole transitions 2=376
Ca^{42}, excited state decay 2=1929
Ca^{42}, half-life det. for K^{42} 3=6198
Ca^{42}(p,γ)Sc^{43} 3=17471
Ca^{44} 1=12170
Ca^{45}, internal bremsstrahlung of beta-decay 3=22327
Ca^{48}CO$_3$, 52 MeV α-particles.d bombardment 4=30321
Cd(n,γ) resonances, isotopic identification 2=469
Cd(p,γ) 10-14 MeV 1=9858
Cd^{103} 0=20394
Cd^{107} 2=16330
Cd^{107} 3=19819
Cd^{107}, on electron capture 2=10072
Cd^{108,110,114}, quadrupole spherical vibration levels 3=4563
Cd^{111}, cascade 173-247 keV 4=22034
Cd^{111m} 2=18271
Cd^{112,114}, excited 4^{+}, second 2^{+} states 2=22740
Cd^{113} (n, γ) Cd^{114}, levels in Cd^{114} 1=17119
Cd^{114}, from Cd^{113}(n, γ), 0·4-9·5 MeV and Cd^{114} levels 3=24959
Cd^{114}, low levels 1=8595
Cd^{114}, from neutron capture 4=1022
Cd^{115m} 0=2636
Ce^{139} 2=22731
Ce^{140} 0=13210
Ce^{141} 2=14028, 22731
Ce^{142}, after decay of 92.5 min La^{142} 4=17097
Ce^{144} 0=5698
Cf^{252} fission, spontaneous, prompt peaks 4=17208
Cl(p,γ)A reactions 1=653
Cl^{34}m, decay 1=8653
Cl^{35} 1=7375
Cl^{35}(n, γ)Cl^{36} 2=14113
Cl^{35}, following proton capture by S^{34} 3=19775
Cl^{35}, from proton capture by S^{34} at 1214 keV 3=8087
Cl^{36} after thermal neutron capture 1=17120
Cl^{37} 1=7375

Gamma-ray spectra—contd
Cl^{38}, 0.66 MeV isomeric decay 2=22732
Co, neutron capture 0=13266
Co(n,γ), above 3-4 MeV, neutron capture 3=22409
Co^{55} 1=13684
Co^{55} → Fe^{55} 0=11307
Co^{55}, $\gamma-\beta$ correl. 2=10042
Co^{55}, $\gamma-\beta$ correls. 3=6192
Co^{55}, 1107 keV level, from Fe^{54}(p,γ), E_p = 770-1100 keV 3=17472
Co^{58}, rel. to Co^{60} contamination 4=15159
Co^{58,60} mixture, resolution technqiue 2=5607
Co^{59}(n,γ)Co^{60} 4=22154
Co^{59} (n, γ), double cascade transition, coincidence spect. 1=17121
Co^{59}(p, γ) 0=20431
Co^{59}(p,n)Ni^{59} 1=9862
Co^{60} and Au^{198}, decay $\beta-\gamma$ correl. 2=10040
Co^{60} decay, $\beta-\gamma$ correl. 3=6204
Co^{60} decay in Co–Fe alloy 2=399
Co^{60} decay in Co–Fe alloy 3=4590
Co^{60} nuclear resonance fluorescence 2=5798
Co^{60}, resolution curve 1=16226
Cr, neutron capture 2=20637
Cr(n, γ) reactions in VVR reactor 1=17110
Cr(n,n'γ), at 0.98-3.31 MeV 3=2466
Cr(p,γ) 10-14 MeV 1=9858
Cr, X-rays from K-capture 2=16362
Cr^{51} 1=12174
Cr^{51} 3=22330
Cr^{51} decay 2=1887
Cr^{52} 1=12175
Cr^{52} excited states, following V^{52} β-decay 4=9448
Cr^{53}(n, γ)Cr^{54} 3=19866
Cr^{53}, meas. rel. to unified model 4=6226
Cr^{56} 0=11351
Cs, γ-transitions induced by Cs(n, γ) 0=13149
CsI crystals, response spectra and energy loss spectra 0=16102
Cs^{128} 1=8637
Cs^{129} 1=5868
Cs^{131}, internal bremsstrahlung 2=5860
Cs^{132} 1=13749
Cs^{132} 3=10295
Cs^{132} decay 0=15560
Cs^{132}, singles and coincidence 2=22767
Cs^{133} 1=10991
Cs^{133} 2=3516
Cs^{133}, following Ba^{133} electron-capture 0=5667-8
Cs^{133}(n, γ) 0=459
Cs^{134} 0=11325
Cs^{134,137} mixture, resolution technique 2=5607
Cs^{137}, automatized method 0=4040
Cs^{139} 3=4594
Cs^{140} 4=3610
Cu, from capture of fast neutrons 3=4649
Cu, electron pair annihilation in, line breadth 0=11558
Cu-, meas., after Cu + n interaction 4=12133
Cu(n,γ) 1=12204
Cu(n, γ) reactions in VVR reactor 1=17110
Cu(n,γ), above 3-4 MeV, neutron capture 3=22409
Cu, under O^{16} and Ne^{22} irrad., 74-145 MeV 3=24986
Cu(p, γ) 0=7557
Cu(p,γ) 10-14 MeV 1=9858
Cu, X-rays from K-capture 2=16362
Cu^{66}, from decay of Ni^{65} 4=19720
Cu^{63} 1=3427
Cu^{63}(n,γn') 1=13809
Cu^{63,65}, excited by 36 MeV N$^{14;4+}$ ions 3=10260
Cu^{64}, rel. to energy level half-lives 1=10994
Cu^{65} 1=3427
Cu^{65}(n,γn') 1=13809
Cu^{65}(p, γ) 0=20431
Cu^{65}(p,n)Zn^{65} 1=9862
Cu^{66} 0=13173
Cu^{68} 1=13748
Cu^{68} decay 4=15187
Dy^{155} → Tb^{155} decay, and coincidences 4=6294
Dy^{155,157} 1=3426
Dy^{157} 3=22342
Dy^{159} 0=1378, 4035, 20390
Dy^{159} 2=16371
Dy^{160}, from Tb^{160} β-decay 3=19790

Gamma-ray spectra—contd

Dy^{161} 0=7473
Dy^{161} 2=1777
Dy^{164} 4=27977
Dy^{165} 3=655
Dy^{166} 0=13175
Er(n,γ) 3=15209
in Er^{159} $\rightarrow$ Ho^{159} $\rightarrow$ Dy^{159} decay 2=5857
in Er^{159} $\rightarrow$ Ho^{159} $\rightarrow$ Dy^{159} decay 3=4597
Er^{161}, 3.1 hr 1=2196
Er^{165}, electron capture decay to Ho^{165} 3=2415
Er^{166} 1=17059
Er^{166} 3=10269
Er^{166} hyperfine splitting of 80.6 keV level 1=9815
Er^{166}, 779.8-80.59 keV cascade 1=13728
Er^{167} 3=4578
Er^{167}, on Coulomb excitation 4=1025
Er^{167} (n,γ) Er^{168} 4=9415
Er^{167m} 2=18271
Er^{171} 0=17565
Er^{171}, beta-decay 3=22344
Er^{172} 1=8639
Er^{172} 1=10977
Er^{172} 1=19394
Es^{254} 2=18287
Eu neutron capture, soft γ lines, meas. 0=9671
Eu^{145} 3=8044
Eu^{145} formation from Ta spallation 2=16413
Eu^{145,146} 0=1381
Eu$^{145-7}$ 1=13750
Eu$^{145-7}$ 3=8005
Eu^{147} 2=5866
Eu^{147}, coincidence, from Gd^{147} decay 3=10300
Eu^{147} decay to Sm^{147} 4=27997
Eu^{147}, γ-γ coincidences 2=13988
Eu^{147,148} 2=16373
Eu^{147,149,151} 1=2181
Eu^{147,149,151} 1=3405
Eu^{148} 4=6291
Eu^{149} 2=5865
Eu^{149} 3=8045
Eu^{150} 1=13751
Eu^{152} 0=20411
Eu^{152} 1=5860
Eu^{152} 1=19407
Eu^{152} decay 4=9413
Eu^{152}, energy meas. by scintillation spectroscopy 4=25316
Eu^{152}(n,γ) 2=3595
Eu^{152}, 245-500 and 1450-2000 keV 2=14063
Eu^{152,152m,154}, multipole mixing ratios, spin sequence 0=17554
Eu^{152,154} 0=5724
Eu^{152,154} 2=14058
Eu^{152,154}, following formation by neutron capture 0=1393
Eu^{152m} 0=7526
Eu^{154} 1=17044
Eu^{154}, cascades 1=663
Eu^{154}, from neutron capture 4=1022
Eu^{154}, 245-500 and 1450-2000 keV 2=14063
Eu^{155} 0=11302
Eu^{155} 1=656
Eu^{156} 1=17021
Eu^{156} $\rightarrow$ Gd^{156} 1=5877
Eu^{159} 2=5844
Eu^{166}—Sm^{146} decay 1=17045
F^{17}, first excited state, lifetime meas. from coincidences 0=17551
F^{18} 0=20414
F^{18} 1=12218
F^{18}, from β^+ decay of Ne^{18} 1=5841
F^{18}, de-excitation of low levels from O^{16}(He^3, p) 1=7323
F^{19}, from α-rays of 2-5 MeV, rel. to levels in Na^{23} 4=15153
F^{19}(d,α)O^{17} 1=9875
F^{19}(d, nγ)Ne^{20}, at 0.5-2 MeV 0=9535
F^{19}(d, nγ)Ne^{20} 0=13206
F^{19}(d,p)F^{20} 1=9875
F^{19}, to ground triplet 2=3574
F^{19}(n, γ)F^{20}, pile-neutron capture 4=6353
F^{19}, from O^{18} + p 0=2661
F^{19}, 1.35 and 1.46 MeV levels, decay 4=12138
F^{19}(p,α)O^{16} 1=9875
F^{19} (p,$\alpha\gamma$) O^{16} 1=19467

Gamma-ray spectra—contd

F^{19} (p,γ) Ne^{20}, rel. to giant dipole resonance 4=15143
F^{20} decay, γ-β correl. 2=10048
F^{20} decay, γ—β correl. 3=6203
Fe 1=13651
Fe, excitation by neutron inelastic scattering 1=9865
Fe, meas. after Fe + n interaction 4=12133
Fe(n,γ) 1=12204
Fe (n, γ), 2-11 MeV 1=17114
Fe(n,γ), above 3-4 MeV, neutron capture 3=22409
Fe^{56}(n,γ n') 1=13809
Fe, from neutron inelastic scatt. to 3.8 MeV 2=5923
Fe(p,γ) 10-14 MeV 1=9858
Fe, radiative capture of neutrons 2=20638
in Fe, scattered rays 1=5703
Fe^{55}, internal bremsstrahlung 2=5860
Fe^{55}, meas. rel. to unified model 4=6226
Fe^{56} from Mn^{56} decay 4=25346
Fe^{56}(n,n$^{1}\gamma$), 1.37 MeV 4=12232
Fe^{57} 4=19474
Fe^{57}, in α and γ-FeOOH, 14.4 line h.f.s. 4=22465
Fe^{57}, effect of acoustically generated phonons on emitting nucleus 0=17883
Fe^{57}, excited level decay 0=17561
Fe^{57}, in Fe$(C_5H_5)_2$ and $[Fe(C_5H_5)_2]^+$, res. absorption 2=3773
Fe^{57}, filtered resonance radiation, time spectra 0=7464
Fe^{57}, 14.4 keV level, and E2 4=25307
Fe^{57}, Mössbauer effect, gravitational red shift meas. 0=7468
Fe^{57}, Mössbauer effect, red shift meas. in an accelerated system 0=7469
Fe^{57}, resonant absorption, polarization in hyperfine spectrum 0=7463
Fe^{57}, shift due to Fe lattice compression effects 2=10305
Fe^{59} 0=4070, 11378
Fe^{59} 1=13753
Fe^{59} 3=648
Fe^{59} $\rightarrow$ Co^{59} 0=7532
Fr^{223} 0=11338
Fr^{223} 1=13746
Fr^{223} 4=17074
Ga, X-rays from K-capture 2=16362
Ga^{58} 2=16345
Ga^{65} 1=648
Ga^{66} 0=13173
Ga^{69} excited level decay 4=9403
Ga^{71}, from 4 hr decay of Zn^{71}, meas. 4=19721
Ga^{72} decay, 3680 ± 40 keV line 4=22066
Ga^{72}, relative intensities of lines 4=3603
Ga^{74} 0=15545
Ga^{74} 2=16321
Ga^{76} 1=17113
Gd, neutron capture $\gamma < 1.5$ MeV from Gd$_2$O$_3$ 4=25412
Gd(n, γ) reaction 0=11448
from Gd(n, γ) reaction 4=6239
Gd from (n, γ) reaction, use for quantitative anal. 4=13756
Gd^{145,146} 0=1381
Gd$^{146-7}$ 3=8005
Gd^{151} electron capture 3=24906
Gd^{152} 1=2200
Gd^{152}, populated by Eu^{152} decay 3=17417
Gd^{153} 0=11302
Gd^{153} 1=615
Gd^{153} decay 4=30326
Gd^{153}, electron capture decay 3=654
Gd^{154,156} decay 2=1822
Gd^{155} 0=15557
Gd^{155}, resonance fluorescence 0=11380
Gd^{156,158} 2=5799, 7930
Gd^{156,158}(n, γ) 2=3595
Gd^{156,158}, neutron-capture γ-rays, comparison 1=8739
Gd^{157}, from β-decay of Eu^{157} 4=19731
Gd^{159} 2=18307
Gd^{159} $\rightarrow$ Tb^{159} decay internal conversion 4=6292
Gd^{160}(p, p2n)Gd^{158m} 2=10018
Gd^{160}(p,p2n)Gd^{158m} 3=6173
Ge, excited by 36 MeV N$^{14;4+}$ ions 3=10260
Ge^{66} 1=3412
Ge^{70}, 0$^+$ level, double Coulomb excitation 3=10261
Ge^{71} 1=10995
Ge^{71}, millisec. isomers 3=15134
Ge^{72}(n,γ n') 1=13809

Gamma-ray spectra—contd
Ge^{72}, proton inelastic scatt. 1=19459
Ge^{74}(n,γ n') 1=13809
Ge^{76}, excited by 36 MeV N$^{14,4+}$ ions 3=10260
Ge^{76}(n,γ n') 1=13809
Ge^{77} 3=7996
H^{3}(d,γ)He^{5} 3=17356
He^{3}(α, γ)Be^{7}, 0·42-5·80 MeV 3=24809
Hf isotopes 3=8051
Hf, soft γ-rays from neutron capture 4=3680
Hf$^{168-9}$ 1=8645
Hf$^{170-1}$ 2=22775
Hf^{171,173} decay 2=7951
Hf^{172}, conversion electrons, 0 to 120 keV 4=9417
Hf^{173} 2=10015
Hf^{177} 2=18259
Hf^{177}, E1 transition probabilities 2=1843
Hf^{177}, relative transition intensities and probabilities 0=13209
Hf^{177} after thermal neutron capture 3=8011
Hf^{178} 1=10992
Hf^{178} from Lu ^{178} decay 4=25356
Hf^{179} 0=414
Hf^{179m} 2=18271
Hf^{180}m 1=4849
Hf^{180m} 1=19410
Hf^{181} 2=5845
Hf^{182}, new nuclide 1=12169
Hf^{197} 0=13142
Hg, neutron capture, 15-300 keV 3=6266
Hg(n, γ), resonance neutron capture 4=6363
Hg neutron resonances 1=705
Hg$^{185-90}$ 1=13686
Hg$^{188-90}$ 1=13804
Hg^{194} decay 2=7958
Hg^{197,197m}, produced by He-bombardments 4=9422
Hg^{198}, from conversion lines 0=20403
Hg^{198}, 412 keV radiation, absolute meas. 3=19795
Hg^{198,199}, from conversion lines 0=20404
Hg^{198,199,201}, from (n, γ) resonances 0=4074
Hg^{199m} 2=18271
Hg^{201m} 2=22734
Hg^{203} internal conversion, β-γ coincidence 2=10064
Ho, resulting from (n,γ) reaction 4=12246
Ho^{155} detection 3=8048
Ho^{158}, 11.5 min. activity 2=22777
Ho^{165} 1=12179
Ho^{165}, deformed, Coulomb excited 4=22043
Ho^{165}, excited by O^{16} ions 3=15120
Ho^{166} 1=17059
Ho^{166} 2=5846
Ho^{166} decay 1=8655
Ho^{166}, emission without recoil of nucleus 0=7533
Ho^{166}, γ-β correl. 2=5859
Ho^{166}, from neutron capture 4=1022
Ho^{166}, 1380-80 keV decay 4=12157
Ho^{166}, transition intensities, K = 0 rotational band 1=8601
Ho^{166m}, aligned 0=15561
Ho^{168} 1=17113
Ho^{169} decay 4=9454
Ho^{170} 1=17113
I 1=13651
I, fast neutron capture 3=6267
I, neutron capture 0=13266
I—p reaction, 100 MeV 3=12591
I^{121,123} 0=4073
I^{124} 0=7538, 20415
I^{127}(n, γ) 0=459
I^{127}, on neutron scatt., inelastic, 2.95 MeV 3=8106
I^{128}, rel. to energy level half-lives 1=10994
I^{128}(n, γ) reaction 0=11381
I^{128}, 0-350 keV, after neutron capture 2=10024
I^{131} 2=10075
I^{131} 3=10294
I^{131} from 25-min beta-activity of Te^{131} 3=22334
I^{132} 1=9847
I^{132} 1=19395
I^{132} 3=22335
I^{134} 1=8640
In^{108} 2=18253
In^{108} decay, γ—γ, β—γ coincidences 3=15150
In^{110,110m} 2=12177

Gamma-ray spectra—contd
In$^{112-116}$ 0=11382
In^{113m,115m} 2=18271
In^{114m} 1=7352
In^{115} 1=3427
In^{115}, electric quadrupole radiation 1=16985
In^{115}, harder γ-rays 3=24899
In^{115}(n, γ)In^{116}, γ-ray spectrum 4=6361
In^{116}, 54 min 0=9601
In^{116} isomers, verification of theory for isomers 3=8114
In^{116m} 2=5807
In^{116m} 2=16331
In^{117}, from β-decay of Cd^{117} 4=19726
In^{119,119m} 2=1800
In^{119g} 0=11352
In^{121g} 0=11352
In^{123g} 0=11352
In^{124} 4=27994
Ir^{182} 1=13752
Ir^{184} 1=13752
Ir^{190} 0=17564
Ir^{191} 2=5848
Ir^{191,193}(n, γ) 0=459
Ir^{191m} 2=18271
Ir^{192} decay, relative intensities, 136 to 613 keV 4=9458
Ir^{192,194} 0=13169
Ir^{194}, 860 to 2130 keV, relative intensities 4=9420
Ir^{194}, relative intensities of lines 3=12602
Ir$^{194-5,197}$ 1=13713
Ir^{195} 2=20569
K^{39}(p, γ)Ca^{40} 2=20620
K^{39} (p, γ) Ca^{40}, rel. to giant dipole resonance 4=15143
K^{39}(p, γ)Ca^{40}, 6-15 MeV, near giant resonance 4=25399
K^{39,41}(p, γ)Ca^{40,42}, 1050-1200 keV, new resonances 4=9513
K^{40} γ:β branching ratio 1=13734
K^{41}+p reactions 2=450
K^{42} 1=7356
Kr^{76} 3=15144
Kr^{79} decay single and coincidence, and Br^{79} levels 4=12148
Kr^{82}, cascades, following Br^{82} decay 4=22030
Kr^{85}, branching ratio measurement 1=10982
Kr^{90}, 33 sec fission product decay 4=22067
La fraction from Ta spallation 2=14060
La, resulting from (n,γ) reaction 4=12246
La, soft γ-rays from neutron capture 4=3680
La^{131} 0=4057
La^{139}, inelastic scattering of 2.95 MeV neutrons 2=10111
La^{139}, on neutron scatt., inelastic, 2.95 MeV 3=8106
La^{140} 1=17060
La^{140} 2=14028
La^{140} β-decay, and Ce^{140} levels 3=22307
La^{140} decay 2=7957
La^{140}, 2300-3900 keV, from La^{139}(n, γ)La^{140} 0=9602
La^{143} 1=8656
Li, meas., after Li + n interaction 4=12133
Li(n, γ) 2=5939
Li, proton bombardment 1=19473
Li^{6}, rel. to 3.56 MeV state lifetime 0=4075
Li^{6}+C^{12} reactions 2=502
Li^{6,7}(Li^{6,7}) reactions 3=685
Li^{6,7}(Li^{6,7}) reactions, rel. to products 2=14144
Li^{7}(n,n')Li^{7*} 3=2474
from Li^{7} (p, γ) Be^{8} 1=19471
Li^{7} (p, γ) Be^{8}, rel. to giant dipole resonance 4=15143
Li^{7}(p,γ) Be^{8} reactions, relative intensity of gamma-rays 1=693
Li^{7}(p,γ)Be^{8}, 1.5-11 MeV 3=22378
Li^{7}(p,γ)Be^{8}, 2.5 to 9 MeV 3=19845
Li^{7}(p, γ)Be^{8}, to 3 MeV, transitions to ground and first excited states 4=1075
Li^{7}(p,$\gamma\alpha$)He^{4}, rel. to Be^{8} new energy levels 4=22007
Lu^{168} 0=9569
Lu$^{168-70}$ 1=8645
Lu$^{169-173}$ 0=2648
Lu^{170} 0=20391
Lu$^{170-1}$ 2=22775
Lu^{171} 1=649
Lu^{172} 0=9570
Lu^{173} 0=5725
Lu^{174m} 4=6242
Lu^{175}, E1 transition probability 2=1843
Lu^{175}, γ-β angular correlations 2=3459
Lu^{175}, γ-γ angular correlations 2=3459

Gamma-ray spectra—contd

- Lu^{175}, relative transition intensities and probabilities 0=13209
- Lu^{175}, 113.8 keV excited state 2=13992
- Lu^{177} 2=20516
- Lu^{177}, decay 4=12158
- Lu^{177} → Gf^{177} 0=4030
- Lu^{178} 1=5926
- Lu^{178,178m,179} 2=5844
- Mg 1=13651
- Mg, excitation by neutron inelastic scattering 1=9865
- Mg, irrad. with 490-1390 keV protons 0=5744
- Mg, meas., after Mg + n interaction 4=12133
- Mg(n,γ) 1=12204
- Mg (n, γ), 2-11 MeV 1=17114
- Mg(p,γ) 10-14 MeV 1=9858
- Mg^{23} 0=425
- Mg^{23}, branching study 0=13181
- Mg^{24} 0=11383
- Mg^{24} decay 2=1805
- Mg^{24} excited states, and collective model 2=5870
- Mg^{24}, half-life det. for Na^{24} 3=6198
- Mg^{24}(n,n$'\gamma$) 1.24 MeV 4=12232
- Mg^{24,25} 0=13139
- Mg^{25} 1=10993
- Mg^{25}(p, γ)Al^{26} 0=13225
- Mg^{25}(p, γ)Al^{26} 2=10102
- Mg^{25}(p,γ)Al^{26}, at 0.85-1.4 MeV 1=9861
- Mg^{27} 2=5869
- Mg^{27} 3=2405
- Mg^{27} 3=6199
- Mn 1=13651
- Mn, excitation by neutron inelastic scattering 1=9865
- Mn(n,γ), above 3-4 MeV, neutron capture 3=22409
- Mn, X-rays from K-capture 2=16362
- Mn^{51} 2=10042
- Mn$^{51,53-5}$, from Cr(p, γ) 2=7981
- Mn^{52} 1=12175
- Mn^{52}, levels in Cr^{52} 2=7929
- Mn^{54} 2=7929
- Mn^{55}, neutron-excited, rel. to nuclear levels 0=5798
- Mn^{56} 0=4024
- Mn^{56}, aligned nuclei in Ni fluosilicate crystal 0=9515
- Mn^{56} and β-γ coincidences 3=8032
- Mn^{56} decay, γ-β correl. 2=10048
- Mn^{56} decay, γ−β correl. 3=6202
- Mn^{56}, rel. to energy level half-lives 1=10994
- Mn^{58} 1=7390
- Mo, resulting from (n,γ) reaction 4=12246
- Mo (p, γ) 0=7557
- Mo^{95}, neutron capture by s and p-wave resonances 3=24958
- Mo^{95}(n, γ) below 700 eV 2=20653
- Mo^{96} 2=3485
- Mo^{96}, multipolarities, following Tc^{96} decay 4=30324
- N, proton bombardment 1=19473
- N^{14} 1=5867
- N^{14}, e.m. transitions 4=17027
- N^{14}, e.m. transitions, by mag. pair spectrometer 4=1009
- N^{14}, from inelastic neutron scatt. 0=4116
- N^{14}, 9.17 MeV level, from C^{13}(p, γ)N^{14} data 0=17562
- N^{14}, 10.22 MeV level decay 3=17399
- N^{14}, rel. to 10.43 MeV state 4=17025
- N^{14}(p,γ)O^{15}, O^{15}, 7.56 MeV level 1=12155
- N^{14}(p,γ)O^{15}, at 12-19.5 MeV 1=2213
- N^{14}(p, γ), 800 MeV, non-resonant radiation 4=9507
- N^{15}, 7.57 MeV level 2=18260
- N^{15} (p, γ) O^{16}, 4 to 14.4 MeV, rel. to giant dipole resonance 4=15144
- N^{15}(p,γ)O^{16}, at 10-15 MeV 1=2213
- N^{15} (p, γ)O^{16*}, transitions to O^{16} 6.06 MeV level 4=6222
- N^{16} decay 4=9446
- N^{16}, excited states 3=24862
- N^{24}, 2·5 – 5·5 MeV range 1=17063
- Na 1=13651
- Na, neutron capture 0=13266
- Na^{21}, branching study 0=13181
- Na^{22} 0=20414
- Na^{22} 1=17152
- Na^{23} 0=13206
- Na^{23}(p,γ)Mg^{24} 1=13792

Gamma-ray spectra—contd

- Na^{23}(p, γ)Mg^{24}, at 300-750 keV 2=5912
- Na^{23}(p, γ)Mg^{24}, at 0.58-1.42 MeV 2=3573
- Na^{23}(p, γ)Mg^{24}, 3.8 to 11.6 MeV 4=9511
- Na^{24}, following β-decay 2=18308
- Na^{24m} 1=19496
- Na^{26} 1=7347
- Nb, resulting from (n,γ) reaction 4=12246
- Nb−p reaction, 100 MeV 3=12591
- Nb^{92}, new 191 min activity 0=17563
- Nb^{92g} 1=19496
- Nb^{93}, excited by inelastic neutron scatt. 0=4121
- Nb^{93}, neutron capture by s and p-wave resonances 3=24958
- Nb^{94,94m} 3=6168
- Nb^{98} 1=17113
- Nb^{99}, millisec. isomers 3=15134
- Nb^{100} 1=17113
- Nd(n, γ) reaction 0=11381
- Nd, soft γ-rays from neutron capture 4=3680
- Nd^{141} 0=5727
- Nd^{142}(p, 2n)Pm^{141m} 2=10018
- Nd^{142}(p,2n)Pm^{141m} 3=6173
- Nd^{143} 1=10959
- Nd^{144} 1=3419
- Nd^{144} 1=12183
- from Nd^{144} (n,γ) 1=2224
- from Nd^{146} (n,γ) 1=2224
- Nd^{147} 1=17040
- Nd^{147} → Pm^{147} decay 0=7535
- Ne^{18} 1=4850
- Ne^{20} 0=13206
- Ne^{20}, from C^{12}(C^{12},α) reaction 1=16989-91
- Ne^{20}, decay 2=1810
- Ne^{20}, excited states 1=665
- Ne^{20}, 5.63 and 5.80 MeV levels, de-excitation widths 2=1813
- Ne^{20}, giant resonance region, by F^{19} + p 1=8722
- Ne^{20}, low-lying levels, rel. to lifetimes 2=1811
- Ne^{20}(p, p$'\gamma$)Ne^{20} 2=1808
- Ne^{21}(p, γ) 0=7568
- Ne^{22} 0=20414
- Ne^{22}(p,pγ) 3=2449
- Ni, from capture of fast neutrons 3=4649
- from Ni (n,γ) 1=4870
- Ni(n,γ), above 3-4 MeV, neutron capture 3=22409
- Ni(p,γ) 10-14 MeV 1=9858
- Ni^{56} decay to Co^{56} 3=15143
- Ni^{58,60,62}(n,γ), with pile neutrons 1=4871
- Ni^{59} decay, through virtual state 3=19816
- Ni^{59}, rel. to virtual electron capture 3=8034
- Ni^{65} 0=17560
- Ni^{65}, γ-β correls. 2=10042
- Ni^{65}, γ−β correls. 3=6192
- Ni^{65}, 2.6 hr 1=655
- Np^{234} 0=4063
- Np^{237} from α decay of Am^{241}, low energy 4=25328
- Np^{239} 0=5700
- Np^{239} decay, high-energy 1=19419
- Np^{240} 0=9603
- Np^{240}, 7.3 min state 0=1380
- O, meas., after O + n interaction 4=12133
- O (n, γ), 2-11 MeV 1=17114
- O (p,γ) 10-14 MeV 1=9858
- O^{15} 1=12218
- O^{15}, from N^{14}(p, γ)O^{15*} 0=4077
- O^{15}, 7.6 MeV state 0=5729
- O^{16}(α,$\alpha'\gamma$)O^{16}, 8.9 to 9.9 MeV 4=22187
- O^{16}(α, γ)Ne^{20}, 4.8 to 9.9 MeV 4=22187
- O^{16}, fourth excited state, search for low-energy γ-rays 0=4078
- O^{16}, from inelastic neutron scatt. 0=4116
- O^{16}, internal conversion 1=13736
- O^{16}, low excited states, transition probabilities 3=15104
- O^{16}, O^{+} 6·03 MeV state, double-γ emission 1=17062
- O^{16}, by proton inelastic scatt. at 150 MeV 1=8723
- O^{16}, quadrupole transition 2=20521
- O^{16}, two-phonon de-excitation, monopole transitions 2=376
- O^{16}, from 2^{+} states 0=5730
- O^{17}, first excited state, lifetime meas. from coincidences 0=17551
- O^{18} gas target, bombardment with 2.66 MeV tritons 0=5731

Gamma-ray spectra—contd
O^{18}, 3.92 and 4.45 MeV states de-excit. 4=22014
O^{19} following β-decay 0=9560
Os, de-excitation of second 2^+ state 1=8725
Os(n, γ) resonances, isotopic identification 2=469
Os, soft γ-rays from neutron capture 4=3680
$Os^{182,183}$ 0=7524-5
$Os^{188,190,192}$ 2^+ transition probabilities 0=9536
Os^{190m} 3=10273
Os^{191} 0=13142
$Os^{191,191m}$ 3=10312
Os^{193} 0=13142
Os^{193}, emission without recoil of nucleus 0=7533
P (n, γ), 2-11 MeV 1=17114
P(n, γ) reactions in VVR reactor 1=17110
P^{29} 1=12158
P^{29} positron decay 2=20556
P^{30} 1=8576
P^{30} decay 2=10104
P^{30} decay 3=6246
P^{30}, fed by $Si^{29}(p, \gamma)$ 4=15212
P^{31} 1=10993
P^{31} 2=22743
P^{31}, collective-vibrational model 0=20319
P^{31}, proton excitation 2=3567
P^{31}, from $Si^{30}(p, \gamma)P^{31}$ 2=22742
$P^{31}(p, \gamma)S^{32}$ 2=1883
Pa^{233} 1=19373
Pa^{233}, γ-transitions 2=3500
Pa^{233}, γ-transitions 3=4605
Pa^{234} 2=7944
Pa^{234} 3=2395
Pa^{234}, (UX2) 0=1386
Pa^{234}, (UZ) 0=2638
Pa^{237} 0=9562
$Pa^{233} \rightarrow U^{233}$ transition 0=15553
Pb, K-shell photoelect. cross-sections 2=5864
Pb, neutron capture, 15-300 keV 3=6266
in Pb, scattered rays 1=5703
Pb(p,γ) 10-14 MeV 1=9858
Pb^{203}, 6·1 sec isomeric state decay 1=19414
$Pb^{204,206-7}$, α-ray excited, E2 transition rates 2=8009
Pb^{205m}, from Bi^{205} decay 0=9571
Pb^{207} 1=12183
Pb^{207}, 570 keV $5/2^-$ state decay, rel. to magnetic moment 4=25323
Pb^{210}, from β-decay of Tl^{210} 4=17105
Pb^{211} 1=13746
Pb^{211} 2=20549
Pb^{212} 1=2197
Pb^{214} and Bi^{214} under Pb absorber 0=5732
Pd^{100} decay 4=22033
Pd^{100} and Rh^{100} decay, rel. to Ru^{100} levels 4=22032
$Pd^{104,106}$, quadrupole spherical vibration levels 3=4563
Pd^{105} 2=3531
Pd^{105}, modified decay scheme 3=24897
Pd^{106}, excited 4+, second 2+, second 2+ states 2=22740
$Pd^{108,110}$ excited states 2=1818
Pd^{111}, two isomers 0=11354
Pm^{141}, millisec isomers 3=15134
$Pm^{141,142}$ 0=5689
$Pm^{143-4,146}$ 1=650
Pm^{144} 0=428
Pm^{147} 0=7512
Pm^{147} 1=8649
Pm^{147} 1=17041
Pm^{148} 1=5878
Pm^{148} 2=16369
Pm^{148}, rel. to Sm^{148} 1.46 MeV level 4=17099
Pm^{149} 0=17532
Pm^{149} from β-decay of Nd^{149} 4=17098
Pm^{151}, absence of 1.5 MeV γ-transition 4=6289
Pm^{151} decay, $\gamma-\beta$ coincidences 4=12186
Pm^{152} 0=7537
Pm^{153} 3=4595
of Po—Be neutron source, C^{12} de-excitation γ-rays 4=19704
Po—Li neutron source 3=590
Po-O^{18} 0=13207
Po^{210}-$B^{10}(\alpha, n)$, Po^{210}-$B^{11}(\alpha, n)$ sources 2=3620
Po^{210}, in electron-capture decay of At^{210} 4=6297
$Po^{211m,212m}$ 2=18268
Po^{212} 0=7509
Po^{212} 2=378, 3534

Gamma-ray spectra—contd
Po^{212}, from Bi^{212} decay 0=17546
Pr(n, γ) resonances, isotopic identification 2=469
Pr, neutron capture, transitions partial widths 2=416
Pr, soft γ-rays from neutron capture 4=3680
Pr^{140} 0=15562
$Pr^{141}(n, \gamma)$, radiative capture, 3-7.5 MeV 4=3681
$Pr^{141}(p, 2n)Nd^{140m}$ 2=10018
$Pr^{141}(p, 2n)Nd^{140m}$ 3=6173
Pr^{142} decay, $\gamma-\beta$ correl. 4=22074
Pr^{143} decay 4=9410
Pr^{144}, circular polarization and $\beta-\gamma$ correl., and spin 3=22270
Pr^{144} and level spins, from $\beta-\gamma$ correl. 3=22308
Pr^{144} transition probability 2=16329
$Pr^{144,5}$ Coulomb excitation, identification of γ-cascades 0=13145
Pt, de-excitation of second 2^+ state 1=8725
Pt(n, γ), resonance neutron capture 4=6363
Pt(p,γ) 10-14 MeV 1=9858
Pt, from Pt(n, γ) resonant capture 0=4079
Pt^{188} 3=8016
Pt^{188} decay, $\gamma-\beta$ coincidences 4=12176
Pt^{192}, external conversion spectrum 1=13742
Pt^{192}, quadrupole spherical vibration levels 3=4563
Pt^{194} 2^+ transition probability 0=9536
$Pt^{194,196}$, from conversion lines 0=20404
Pt^{195}, excited states 0=1407
Pt^{195m} 2=18271
Pt^{196} 2=10022
Pt^{196}, excited states 2=20524
Pt^{196}, rel. to nuclear-level spins 0=20355
Pt^{197} decay to Au^{197} 3=24913
Pt^{199} decay and Au^{199} low levels 3=17422
$Pu^{238,240}$, low energy 4=25329
Ra, calorimetric measurement 0=5685
Ra dispersion halos near ore deposits 4=2182
$Ra^{222,224,226}$ 0=13184
Ra^{223} 1=13746
Rb^{82}, 1.25 min. decay 2=20567
Rb^{86}, β-γ cascade 2=407
Rb^{86} decay, $\gamma-\beta$ directional correlation 4=9449
Re^{184} 3=8014
Re^{186}, $\gamma-\gamma$ cascade, ang. correl. rotation 1=8568
Re^{186}, 631-137 keV decay 4=12157
$Re^{186,188}$, neutron capture, 30-350 keV 3=12696
Re^{187} 0=11384
Re^{187}, 552-134 and 72-134 keV angular correl. 4=9419
Re^{189} 4=3618
Re^{188}, decay, $\gamma-\gamma$ coincidence 3=6209
$Re^{188} \rightarrow Os^{188}$ decay 0=5733
Rh^{97} 2=16357
Rh^{97}, decay 3=2408
Rh^{102} 2=3512
Rh^{102} decay 1=13718
$Rh^{102} \rightarrow Ru^{102}$ 1=13755
$Rh^{103}(n,\gamma)$ 4=22139
$Rh^{103}(n, \gamma)Rh^{104}$, cascade 2=16420
$Rh^{103}(n,\gamma)Rh^{104}$, cascade 3=6272
Rh^{103m} 2=18271
Rh^{104} 0=4055
Rh^{104} 4=17060
Rh^{104}, rel. to energy level half-lives 1=10994
Rh^{104}, low-energy 2=12211
Rh^{104m} 2=20525
Rh^{105} 0=11385
Rh^{105}, from Ru^{105} decay 0=11357
Rh^{106} 0=15563
Rh^{106} 2=5872
$Rh^{106} \rightarrow Pd^{106}$ 0=11358
Rh^{106m} 0=11359
Rn^{219} 1=13746
Ru^{95} 3=19818
Ru^{100} 2=5871
$Ru^{104}(n, \gamma)Ru^{105}$ 0=20498
S (n, γ), 2-11 MeV 1=17114
S^{30} 1=7336
S^{31}, branching study 0=13181
S^{32}, proton inelastic scatt., spin of second excited state 1=8591
S^{32}, from P^{31} proton capture 3=7989
$S^{32}(p, \gamma)Cl^{33}$ 0=7565
$S^{32,34}$, proton bombarded 2=451

Gamma-ray spectra—contd
S^{33}(p, γ)Cl^{34}, 300-1300 keV, branchings in Cl^{34} 4=28031
S^{34}(p,γ)Cl^{35}, 800-1400 keV p's 3=17469
S^{34}(p, γ)Cl^{35}, 6 resonances, 848-1214 keV 2=16320
Sb(n,γ) 1=12204
Sb(n, γ) reactions in VVR reactor 1=17110
Sb(n, γ) resonances, isotopic identification 2=469
Sb—p reaction, 100 MeV 3=12591
Sb^{113} decay 2=16358
Sb^{113,115} 0=13201
Sb^{113,115} 3=10291
Sb^{118m} 2=16331
Sb^{120,120m} 1=622
Sb^{122m}, isomeric transition 2=5861
Sb^{124} 0=7538
Sb^{124} 4=22037
Sb^{124}, rel. to levels and transitions 4=17061
Sb^{127} 2=5873
Sb^{128} 2=5873
Sb^{129} 2=5873
Sc(n, γ) reactions in VVR reactor 1=17110
Sc^{41} 1=11011
Sc^{44} 1=7356
Sc^{44,44m}, produced by He-bombardments 4=9422
Sc^{45}, 1.660 MeV level 4=6278
Sc^{46}, 0-350 keV, after neutron capture 2=10024
Sc^{47}, mixing ratio, and strong interactions, time-reversal invariance 3=24893
Sc^{48} 3=10288
Sc^{48,50,50m} 3=12622
Se^{73}, isomers 1=8642
Se^{75} 0=4062
Se^{75} 1=17056
Se^{75} decay 4=9411
Se^{75} decay, transitions of As^{75} 0=13204
Se^{76} 0=13213
Se^{76}(n,γn') 1=13809
Se^{76}, proton inelastic scatt. 1=19459
Se^{76,78}, Coulomb excited state 4=22029
Se^{77}, by Coulomb excitation 2=5970
Se^{77m} 2=18271
Se^{78}, proton inelastic scatt. 1=19459
Se^{80}(n,γn') 1=13809
Se^{81} 0=2658
Se^{81} 1=13756
Se^{81,81m} 3=2406
Se^{81m}, in equilibrium with Se^{81} 1=13748
Se^{83} 1=13748
Se^{83}, γ-β correl. 2=10042
Se^{83}, $\gamma-\beta$ correl. 3=6192
Si (n, γ), 2-11 MeV 1=17114
Si, natural, proton bombard. at 0.3-1.84 MeV 0=17594
Si(p,γ) 10-14 MeV 1=9858
Si^{26} 0=20417
Si^{27}, branching study 0=13181
Si^{28} 3=19811
Si^{28} decay 2=1805
Si^{28} excited states, and collective model 2=5870
Si^{28} scattered, rel. to nucleus energy levels 1=16993
Si^{28}, suppression of dipole radiation 1=8772
from Si^{28} (p,γ) P^{29} 1=4867
Si^{28}(p,γ)P^{29}, E$_p$=369 KeV 1=12159
Si^{28}(p,γ)P^{29}, spin of P^{29} low levels 1=9817
Si^{28}(p,p'), invest. of 1st excited state 3=22299
Si^{29} 1=10993
Si^{29}(p,γ)P^{30}, at <1 MeV, levels in P^{30} 1=8576
Si^{29}(p, γ)P^{30}, Ep=1375, 1500 resonances 2=10104
Si^{29}(p,γ)P^{30}, E$_p$=1375 and 1500 keV resonances 3=6246
Si^{29}(p, γ)P^{30} at 6.847 MeV 2=3576
Si^{29*} 0=9587
Si^{30}(p, γ)P^{31}, 1177 to 1509 keV 3=19774
Si^{30}(p,γ)P^{31}, 1514 to 3435 keV 4=12224
Si^{30}(p,γ)P^{31}, reson. between 1 and 2.7 MeV p energy, and P^{31} levels 3=12586
Sm, neutron capture γ < 1.5 MeV from Sm$_2$O$_3$ 4=25412
Sm (n, γ) reaction 0=11448
Sm from (n, γ) reaction, use for quantitative anal. 4=13756
Sm^{142,143} 0=5689
Sm^{145} decay 4=9411
Sm^{147}, Coulomb excitation 3=19782
Sm^{147}(p, 2n)Eu^{146m} 2=10018
Sm^{147}(p, 2n)Eu^{146m} 3=6173
Sm^{148}, from Eu^{148} decay γ-rays 3=10265

Gamma-ray spectra—contd
Sm^{149}, 22.5 keV transition, Mössbauer effect 4=17068
Sm^{149}(n,γ), 585-440 keV cascade 4=22041
Sm^{150}, after neutron capture 3=10353
Sm^{150}, thermal neutron capture 3=15118
Sm^{150,153}(n, γ) 2=3595
Sm^{151} 2=404
Sm^{152} 0=2646
Sm^{152} decay 2=1822
Sm^{152}, excited states 4=22077
Sm^{152}, 2$^+$ and 4$^+$ rotational level decays 4=22042
Sm^{153} 1=615
Sm^{153}, using bent crystal spectrometer 0=17282
Sm^{153} decay, γ-γ coincidences 2=3528
Sm^{153} → Eu^{153} decay 1=13731
Sm^{153m} → Eu^{153} decay 0=7535
Sm^{155} 0=9572
Sm^{155} 3=12635
Sn, fast neutron capture 3=6267
Sn(C^{12}, γ) reaction 0=13250
Sn(n,γ) 1=12204
Sn(n, γ) reactions in VVR reactor 1=17110
Sn(p, γ) 0=7557
Sn(p,γ) 10-14 MeV 1=9858
Sn^{113} 1=9842
Sn^{113}, γ-ray and inner bremsstrahlung transitions 0=15564
Sn^{113m} 2=383
Sn^{113m} 3=10291
Sn^{113m} 0=15534
Sn^{115} 2=5808
Sn^{115}, isomeric state double cascade decay 4=22035
Sn^{116} 1=10978
Sn^{116} 2=1823
Sn^{117m} 2=18271
Sn^{117m}, γ-γ correl. meas. 2=3527
Sn^{118}, E2 transition, pair correl. effects 2=384
Sn^{119} 4=19474
Sn^{119}, isomer shift 2=5790
Sn^{119}, 23.8 keV level, transitions 2=5810
Sn^{119}, 23.8 keV level, transitions 3=4571
Sn^{120}, E2 transition, pair correl. effects 2=384
Sn^{120}, $\gamma-\gamma$ cascade 1=16998
Sn^{127} 2=5873
Sn^{128} 2=5873
Sr^{83} 2=3513
Sr^{85} 2=18300
Sr^{85,85m} after positron decay of Y^{85} 4=6281
Sr^{87m} 2=18271
Sr^{88} 1=12183
Sr^{89} 2=20538
Sr^{90}, from decay of Rb^{90} 4=22068
Sr^{93} 2=20570
Ta isotopes, neutron deficient 3=8051
Ta, under O^{16} and Ne^{22} irrad., 74-145 MeV 3±24986
Ta, neutron capture, 15-300 keV 3=6266
Ta(n,γ) 3=15209
Ta(p, γ) 0=7557
Ta$^{173-175}$ 0=9605
Ta^{175} 2=14065
Ta^{176} 2=14065
Ta^{176} 3=15155
Ta^{176}, complex spectrum analysed 3=24909
Ta^{181}, $\beta-\gamma$ coincidence study 0=20412
Ta^{181}, $\gamma-\gamma$ angular correl., 133-482 keV 4=9388
Ta^{181}(n,γ) at 2·9 MeV 3=6256
Ta^{181}(n, γ) at 2.95 MeV 2=10114
Ta^{182} 0=1392
Ta^{182} 3=8012
Ta^{182}, using bent crystal spectrometer 0=17282
Ta^{182m}, 16 min 1=3404
Ta^{185} 0=20418
Tb isotopes, decay 1=17031
Tb isotopes, n deficient, from Ta + p, 660 MeV 3=10302
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$Al^{27}(p,\gamma)Si^{28}$ at 992 keV 2=22808
Ar^{40}, precise meas., from decay of K^{40} 4=17049
Ar^{41}, $\beta-\gamma$ circ. polarization correl., isotopic spin conservation 1=660
As^{70} 3=12624
As^{73} $\gamma\gamma$ correlation, 359 - 66 keV 4=3568
As^{74}, γ-γ coincidences 1=8620
As^{76}, circular polariz. in coinc. with β-rays 2=16372
As^{76}, $\gamma-\gamma$ coincidences 0=4065
As^{80}, $\beta-\gamma$ and $\gamma-\gamma$ coincidence 0=5697
$Au^{190,192}$, β-γ coincidences 2=409
Au^{196} 3=10274
Au^{196}, β-γ coincidences 2=12166
Au^{197} 3=6458
Au^{198}, anisotropy due to nuclear polarization 0=9520
Au^{198}, β-γ circular polarization correl. 1=13726
Au^{198} decay, 960 keV β—412 keV γ correl. 4=12189
Au^{198}, γ-ray polarization 1=17036
B^{10}, by inelastic neutron scatt. 0=7605
$B^{10}(d, n\gamma)C^{11}$, n—γ coincidences 0=20455
$B^{10}(d,p)B^{11}$, γ-quanta circular polarization 2=16426
$B^{10}(He^3, p)C^{12}$, at 2·2 MeV, p—γ—γ coincidences 1=17058
B^{11}, 2·13 MeV state 3=7986
B^{11} proton capture 3=15192
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Ba^{134}, $\gamma-\gamma$ coincidences 3=15114
Ba^{137}, 2-quanta transitions, probability 0=17522
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$Be^{9}(\alpha,n\gamma)C^{12}$, γ-ray excit. function 3=10391
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$Bi^{209}(n,\gamma)Bi^{210}$, $\gamma-\gamma$ coincidence invest. 2=3591
Bi^{210}, $\alpha-\gamma$ correlation 0=2633
Bi^{210}(RaE), 1st forbidden decay, circ. polarization of internal bremsstrahlung 0=11362
Bi^{212}, intensity 0=9607
Bi^{212} (ThC), $\alpha-\gamma$ and $\alpha-\gamma-\gamma$ coincidences 1=2186
Bi^{212} (ThC), $\alpha-\gamma$, $\alpha-\gamma-\gamma$ and $\gamma-\gamma-\gamma$ coincidences 1=2186
Bi^{212}(ThC), α-γ, γ-γ coincidences 2=16359
Br^{76}, $\gamma-\beta$ coincidences 0=4066
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C^{12}, double E1 de-excitation 1=2187
C^{12}, e.m. widths on oscillating drop model 2=9985
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C^{12}, second excited state, decay 4=9392
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Ca^{40}, monopolar transitions, double γ emission 4=6219
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Cd^{107}, $\gamma-\gamma$, $\beta-\gamma$ coincidences 3=19819
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Cd^{114}, decay probability, theory 4=9405
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Ce^{144}, low-energy, intensity meas. 3=10296
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Cl^{36}, cascade transitions, due to neutron capture 0=4117
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Cm^{244}, 2^+ level decay, coincidences 2=22730
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Co^{56}, γ-β circ. polarization ang. correl. 2=20552
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Co^{57} source, small-scale electro deposition cell 4=30906
Co^{58}, effects of nuclear alignment 3=17433
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Co^{60}, $\beta-\gamma$ circular correlation 0=7516
Co^{60}, circ. polarization, following β-decay 0=420
Co^{60} coincidence meas., nanosecond range 0=15219
Co^{60}, with free-air chamber 0=17559
Co^{60} source, equiv. to 280g Ra, apparatus for use 0=5678
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Cr^{51}, delayed-action, in lifetime 3=10258
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$Cr^{51,53,54}$, after thermal neutron capture 2=10119
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Cs^{131}, collective effects meas. 4=9407
Cs^{131}, lifetime and multipolarity meas. 4=25315
Cs^{134} decay to Ba^{134} 3=24903
Cs^{134}, γ-β, circ. polarization ang. correl. 2=20552
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Cs^{135} isomer, M4 and E6 transitions 2=18276
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Eu^{153}, after decay of Gd^{153} and Sm^{153} 4=17100
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$Fe^{54,56}$, collective character of transitions 2=20515
$Fe^{54,56}$, transition probabilities 2=372
Fe^{55}, δ(E2/M1) mixing ratios 0=11307
Fe^{56}, from decay of Co^{56} 4=19719
Fe^{56}, meas. by inelastic neutron scatt. 2=18330
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Fe^{57}, 123 keV, E2/M1 mixing ratio 3=7995
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Fe^{59} 3=17430
Fe^{59}, anisotropy, in ferromagnets 0=9521
Fe^{59}, circular polarization 0=7532
Fe^{59}, $\gamma-\beta$ circ. polarization ang. correl. 2=20552
Fe^{59}, $\gamma-\gamma$ and $\beta-\gamma$ coincidences 0=4070
Fe^{59}, $\gamma-\gamma$ coincidences 3=648
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Gd^{155}, 105 keV resonance fluorescence 0=11380
$Gd^{155,157}$, branching ratios and mag. dipole transition probabilities 2=20514
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Ge^{77m}, E3 transition 2=10066
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Hf^{177}, E2-M1 mixing ratio 2=10041
Hf^{178}, partial radiation widths 0=4080
Hf^{180m}, multipolarities 3=6179
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In^{114m}, two-quantum decay, search for $\gamma-\gamma$ coincidences 3=2388
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Mg^{25}, M1—E2 mixing anplitudes 1=10993
Mg^{27}, $\beta-\gamma$ coincidences 3=2405
Mg^{27}, $\gamma-\gamma$ and $\beta-\gamma$ coincidences 3=6199
Mg^{27}, low-lying states 4=25302
Mn^{52}, $\beta-\gamma$ circ. polarization correl. 2=22768
Mn^{55}, by Coulomb excitation by $Li^{6,7}$ ions 0=4107
Mn^{55}, $\gamma-\gamma$ coincidences, rel. to nuclear levels 0=5798
Mn^{56}, 25 and 85 keV transition, multipolarity 1=13659
Mo^{94}, coincidences, directional correl. 2=16351
Mo^{99} decay, number, from $\beta-\gamma$ coincidences 3=8037
N^{14}, e.m. transitions 4=17027
N^{14}, polarization of 5.83-5.10 MeV transition 2=20519
N^{14}, in water, specific activity, from surface dose-rate meas. 1=627
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$N^{15}(p,\gamma)O^{16}$ 0=1434
Na, $\gamma-\gamma$ coincidence meas. 2=9500
$Na^{22,24}$, circ. polarization, following β-decay 0=420
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Nb^{95}, $\beta-\gamma$ circular polarization correl. 2=10076
Nb^{96}, coincidences 3=22305
Nd^{142}, 1.57 MeV, internal pair formation 2=1850
Nd^{144}, internal pair formation 4=17016
Nd^{144}, $\gamma-\gamma$ polarization ang. correls. 3=12633
Nd^{147}, circular polarization, $\beta-\gamma$ correl., asymmetry coeff. 1=13715
Nd^{147} decay 0=427
Nd^{147}, mixing ratios, by orientation in Nd ethylsulphate 1=12147
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Ne^{19}, from 1st and 2nd excited levels 3=15102
$Ne^{20}(\alpha,\alpha'\gamma)Ne^{20}$, $\alpha-\gamma$ coincidences 3=2498
$Ne^{20}(d,n\gamma)Na^{21}$, n—$\gamma$ coincidences 3=2385
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$Ni^{64}(p,n\gamma)Cu^{64}$, and Cu^{64} levels 3=12589
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O^{17}, first excited state lifetime 4=22015
O^{18}, low-lying levels 3=17402
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P^{31}, 9.42 → 4.43 MeV levels, polarization 4=25303
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Pa^{234}, $\gamma-\beta$, $\gamma-\gamma$ coincidences 2=7944
Pa^{234}, $\gamma-\gamma$ coincidences 0=1386
Pa^{234}, (UZ), $\beta-\gamma$ and $\gamma-\gamma$ coincidences 0=2638
Pa^{233}, e—γ coincidences 3=10318
$Pb^{197m,199m}$, M1, M4 transitions 2=18305
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Pb^{208}, triple coinc. and correl. meas. 4=27983
Pb^{212}, $\gamma-\gamma$ coincidences 1=2197
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Pm^{151}, e—γ, $\beta-\gamma$ coincidences 3=8042
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$Po^{207,205}$ isomeric states, multipolarity assignments 2=18266
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Po^{214}, $\beta-\gamma$ coincidences 0=9604
Pr^{141} decay 3=17441
Pr^{141}, E2/M1 ratio 2=20568
Pr^{144} decay, number 3=8039
Pr^{144}, E2-M1 mixing in 100 keV transition 4=3576
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Pt^{192}, from decay of Ir^{192}, intensities 2=20523
Pt^{195}, partial radiation widths 0=4080
Pt^{196}, 333 keV $2^+ \rightarrow 2^+$ transition 2=10060
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Ra, effective energy 0=1262
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Rb^{85}, double quantum emission 2=12175
Rb^{85}, polarization, parity conservation 0=17502
Rb^{86}, β-decay and γ-ray transition 4=1070
Rb^{86}, $\beta-\gamma$ circular polarization correl. 2=3525
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Re^{187}, multipolarity assignments 3=8015
Re^{187}, resonance fluorescence meas. 4=22046
Rh^{102} $\gamma-\gamma$ coincidences 2=3512
Rh^{102}, isomeric state 3=15146
Rh^{103}, cascades 2=22776
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Rh^{105}, multipolarity assignments 3=7997
Rh^{106}, coincidence spectra 2=5872
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$Ru^{104}(n,\gamma)Ru^{105}$, coincidences 0=20498
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S^{32}, E2/M1 intensity ratios 2=10103
$S^{32}(p,\gamma)Cl^{33}$, polarization 0=15574
$S^{32,34}$, $\gamma-\gamma$ coincidences 2=451
Sb^{118}, 5 hr, polarization correlation 1=2198
Sb^{121}, low-lying levels 4=3574
Sb^{122}, anisotropy due to nuclear polarization 0=9520
Sb^{122}, $\beta-\gamma$ circular polarization correl. 1=13726
Sb^{122}, $\beta-\gamma$ correlation and γ-ray polarization 1=17036
Sb^{124}, $\beta-\gamma$ circ. polarization correl. 1=3417
Sb^{124} isomeric levels, $\gamma-\gamma$, $\beta-\gamma$ coincidences 2=20560
Sb^{125} decay, $\gamma-\gamma$ coincidences and Te^{125} levels 4=19695
Sb^{128} decay, $\gamma-\gamma$, $\beta-\gamma$ coincidences 2=18306
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Sc^{46} β-decay, γ-ray circular polarization 2=14067
Sc^{46}, $\beta-\gamma$ circ. polarization correl., isotopic spin conservation 1=660
Sc^{46}, $\beta-\gamma$ polarization correlation 1=13727
Sc^{46}, circ. polarization, following β-decay 0=420
Sc^{47} beta-decay meas. 4=12181
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Se^{75}, electron capture decay, circ. polarization of resonance-scattered γ-rays 0=13214
Se^{75} and Sb^{125}, decay schemes study 0=2653
Se^{75m}, E3 transition 2=10066
Se^{76}, 0.559 MeV level 3=10262
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$Si^{30}(p,\gamma)P^{31}$, polarization 0=15574
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Sm^{143}, isomeric state 3=6174
Sm^{147}, $\gamma-\gamma$ cascades 3=10298
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Sn^{115} cascade de-excitation 3=8098
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Ta^{181}, attenuation in liquids of ang. correl. of 133-482 keV cascade 2=20557
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Ta^{181}, 619 keV level 3=17420
Ta^{182} 3=12601
Ta^{182}, $\gamma-\gamma$ coincidences 0=1392
Ta^{182}, relative intensities, external conversion meas. 1=19421
Tb isotopes, n deficient, $\gamma-\gamma$ coincidences, from Ta + p 3=10302
Tb^{152}, $\gamma-\gamma$ and $e-\gamma$ coincidences 1=2200
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Tc^{95} isomer, $\gamma-\gamma$ cascades 1=8657
Tc^{96}, coincidences 3=22305
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Th active deposit, γ-ray intensities 0=9607
Th^{232}, vib. E1, E2, E3 transition probabilities 3=10241
Ti (n, γ), 50 keV-10 MeV, γ-ray cascades 3=24948
Ti^{46}, de-excitation, $\gamma-\gamma$ directional correl. 2=16332
Ti^{46}, $\gamma-\gamma$ directional correl. 3=15142
Ti^{47}, by Coulomb excitation by $Li^{6,7}$ ions 0=4107
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Tl^{201}, E2/M1 mixing ratio 0=11387
Tl^{202}, $\gamma-\gamma$ coincidences 0=1376
Tl^{208} 2=10026
Tl^{208}, intensity 0=9607
Tm(n,γ), capture, 60-500 keV 3=10355
Tm^{166}, $\gamma-\gamma$ coincidence 0=13172
Tm^{169}, $\gamma-\gamma$ angular correlation 0=20409
Tm^{169} h.f.s. in Fe_2Tm, Mössbauer effect meas. 4=12600
Tm^{169}, h.f.s. splitting in oxide crystals 3=2416
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U^{239}, partial radiation widths 0=4080
U^{239}, partial radiation widths, fluctuations 4=19705
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V^{48}, $\gamma-\beta$ circ. polarization ang. correl. 2=20552
V^{51}, proton reactions, excitation functions 2=452
V^{58}, delayed-action, in lifetime meas. 3=10258
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W^{182}, $\gamma-\gamma$ coincidence, and Mössbauer effect 4=3544
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W^{182} Mössbauer effect, by $\gamma-\gamma$ coincidence method 4=30302
W^{182}, 152 keV E1 transition 3=657
W^{182}, relative intensities, external conversion meas. 1=19421
W^{187}, β-decay, $\gamma-\gamma$ coincidences 4=6245
Xe^{131}, from decay of I^{131} 4=19719
Xe^{131}, low energy transitions 3=651
Xe^{131m}, $X-\gamma$ coincidences 1=5853
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Y^{86}, $\gamma-\gamma$ correl. 2=5855
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Yb^{173}, branching ratios and mag. dipole transitions 2=20514
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Al^{27}(p, γ)Si^{28} 992 keV resonance 3=12668
Am^{241,243}, α–γ ang. correl., perturb. by environment 3=4607
Am^{243}, γ–α ang. correl. rel. to mag. fld. 3=6211
Ar^{40}, p-bombarded at 5.6 MeV, γ–γ, γ–p ang. correls. 3=6250
Ar^{40}(p, γ)K^{41} reaction 4=6340
As^{75}, β–γ correlation 1=13724
As^{76}, at-resonance β–γ ang. correl. 0=15549
As^{76}, β–γ ang. correl. 1=19390
As^{76}, β-γ ang. correl. in resonance 1=17037

Gamma-rays—contd
angular distribution—contd
As^{76}, $\beta-\gamma$ correlation 3=10289
Au^{196}, $\beta-\gamma$ correl., anomalous 2=3522, 18296
Au^{196}, $\gamma-\gamma$ directional correl. 3=10274
Au^{198}, $\beta-\gamma$ ang. correl., directional and circ. polarization correl., transverse β-polarization 0=11365-6
Au^{198} $\beta-\gamma$ correlation, angular dependence 1=8647
Au^{199}, $\beta-\gamma$ directional correl. 1=19404
Au^{198}, scattered in air above ground 0=4067
$B^{10}(d,p)B^{11}$, at 1.2 MeV, $p-\gamma$ correlations 1=2232
$B^{10}(He^3, p\gamma)C^{12}$, correlation with protons 2=1928
B^{11}, excited states, from $B^{10}(d, p)B^{11}$, $p-\gamma$, $\gamma-\gamma$ ang. correl. 0=17597
$B^{11}(d, n\gamma_{1541\ MeV})C^{12}$, $n-\gamma$ correl. 3=24967
$B^{11}(d,n)C^{12*}_{4\cdot 43}(\gamma-n)$ ang. correl. 3=15226
B^{12} de-excitation after $B^{11}(d, p)B^{12}$ 3=4664
B^{12}, from 0.95 MeV level 0=7456
$Ba(n, \gamma)$, diff. correl. and Cs^{131} 133 keV level g 4=27975
Ba^{133} decay, correl. 3=17440
Ba^{133} decay, $\gamma-\gamma$ directional correl. meas. 4=22073
Ba^{134}, $\gamma-\gamma$ directional correl. 4=9408
Ba^{136}, $\gamma-\gamma$ ang. correl. 1=9833
Be^8, $\gamma-\alpha$ correlation 1=635
$Be^9(\alpha, n\gamma)C^{12}$, distrib. and $n-\gamma$ correl. 0=20465
$Be^9(\alpha, n\gamma)C^{12}$, at 3.35 MeV, $n-\gamma$ ang. correl. 2=5967
$Be^9(d, n\gamma)B^{10}$, $n-\gamma$ ang. correl. 2=20669
$Be^9(d,p\gamma)Be^{10}$, $p-\gamma$ correlation 1=5934
$Be^9(d, p\gamma)Be^{10}$, 13.6 MeV, $\gamma-p$ correl. 4=9553
$Be^9(p,\gamma)$ B^{10}, rel. to B^{10} levels 1=5838
in Bi, from electron annihilation 1=2046
in Bi, from electron annihilation 1=3151
Bi, from neutron inelastic scattering 0=20502
Bi^{209} 2=13999
Bi^{212}, $\alpha-\gamma$ ang. correl. meas. 4=3622
C^{12} 2=13999
C^{12}, Al^{27}, Ca^{40}, from resonant scattering 2=419
C^{12}, 6.45 MeV γ-ray to 6.93 MeV state 2=1799
$C^{12}[Mg^{24}]$ $(\alpha, \alpha'\gamma)$, $\gamma-\alpha$ correl., rel. to nuclear polarization 4=28062
$C^{12}(C^{12}, \alpha)Ne^{20}$, $\alpha-\gamma$ ang. correl. 2=3623
$C^{12}(d, p\gamma)$, $p-\gamma$ ang. correls. 3=679
$C^{12}(d,p_3\gamma)C^{13*}$, at 1.7-3.1 MeV 1=718
from $C^{12}(n,n'\gamma)C^{12}$ 1=2221
C^{12} (p,γ) 1=4865
$C^{12}(p,\gamma)N^{13}$ 3=12666
$C^{12}(p,\gamma_0)N^{13}$ 3=12666
$C^{12}(p,\gamma)N^{13}$, 1.5 to 2.0 MeV 3=17465
$C^{12}(p,p'\gamma)C^{12}$, $p'-\gamma$ correlation 1=5906
$C^{12}(p, p'\gamma)C^{12}$, $p'-\gamma$ correl. rel. to proton spin flip effect 4=17124
$C^{12}(p, p'\gamma)$, rel. to proton spin flip 4=17123
$C^{12}(p, p'\gamma)$ 4.4 MeV, $p-\gamma$ ang. correl. 0=11410
$C^{12}(p, p'\gamma)C^{12}$, 4.43 MeV γ-ray 2=1878, 20608
$C^{12}(p_1, p_2\gamma)C^{12}$, 5.36, 5.89 MeV protons 2=7979
$C^{12}-p$, inelastic scattering, at 150 MeV 2=3565
$C^{12}(p, p'\pi^\circ; \pi^\circ\rightarrow 2\gamma)$, meas. 4=28027
C^{13}, inelastic proton scatt., 3.8-4.5 MeV 0=17499
$C^{13}(He^3,\alpha\gamma)C^{12}$, $\alpha-\gamma$ ang. correls. 3=2496
$C^{13}(He^3, \alpha)C^{12}$, corr. with α-ray spectra 1=19525
C^{13} (p,γ) 1=4865
$C^{14}(d,p\gamma)C^{15}$, at 2.9-3.4 MeV 2=18349
$C^{14}(p,\gamma)N^{15}$, 351 keV resonance 1=692
Ca 2=13999
$Ca^{40}(\gamma, p)K^{39}$, up to 22 MeV 2=10085
in $Ca^{40}(p, p')Ca^{40}$ reaction 0=7560
Ca^{42}, ang. correl. of γ cascade 0=1361
Ca^{45}, $\gamma-\gamma$ correl., rel. to spin and parity 4=22024
Ca^{47}, $\beta-\gamma-\gamma$ ang. correl., rel to time reversal 3=10033
Ca^{47}, $\beta-\gamma_1-\gamma_2$ correl., rel. to time-reversal invariance 4=25345
$Cd(n, \gamma)$, using polarized neutrons, parity conservation 0=2684
Cd^{110}, γ-cascades, directional correlations 3=15148
Cd^{111}, ang. correl. in Ag dilute alloys, elec. field gradient det. 1=3588
Cd^{111}, cascade 173-247 keV, ang. correl. 4=22034
Cd^{111} decay in Ag dilute alloys, rel. to internal fields 3=22718
Cd^{114}, ang. correl. in In single crystals 0=2656
Ce, from positron annihilation, rel. to electronic struct. 4=17413

Gamma-rays—contd
angular distribution—contd
$Ce^{137, 137m}$, oriented in Nd ethyl sulphate, mag. moment of Ce^{137m} 1=2162
$Ce^{137, 137m, 139, 141, 143}$, 3=7969
Ce^{140}, coincident $\gamma-\gamma$ correl. 4=3575
Ce^{140}, from decay of La^{140}, $\gamma-\gamma$ ang. correls. 3=24868
Ce^{141}, aligned, anisotropy temp. var. as thermometer 4=16307
Ce^{141}, $\beta-\gamma$ correlation 2=14028
Ce^{141}, $\beta-\gamma$ directional and circular polarization correlations 2=408
Ce^{143}, 293-56 keV cascade, ang. correls. 3=10297
Ce^{144}, $\beta-\gamma$ coincidences, lifetimes of Pr^{144} levels 2=22741
Ce^{144}, $\gamma-\beta$ correl., rel. to Pr^{144} spin 4=3539
Ce^{144}, $\gamma-\gamma$ ang. correl. 3=10296
$Cl(p,\gamma)A$ reactions 1=653
$Cl^{35}(n,\gamma)Cl^{36}$, $\gamma-\gamma$ ang. correls. 3=6268
from Cl^{35} $(p,p'\gamma)Cl^{35}$ 1=9814
Cm^{243}, $\alpha-\gamma$ ang. correl. perturb. by environment 3=4607
$Co^{55, 58}$, rel. to nuclear props. 0=11307
Co^{56}, allowed β^+ decay, $\beta^+-\gamma$ correl. 1=2185
Co^{58}, $\gamma-\gamma$ ang. correls. 3=649
Co^{60}, $\beta-\gamma$ correlation 0=7515
Co^{60}, in Co crystal at 0.04°K nuclear alignment study 0=4285
Co^{60}, dynamically oriented in a crystal, γ-ray anisotropy 0=5655
Co^{60}, nuclear orientation in CeZn nitrate 1=3586
Co^{60}, nuclear orientation in Co metal 0=20786
Cr^{51}, in Cr-Fe alloys 0=13115
Cr^{51}, oriented in CeMg nitrate, anisotropy 1=7518
Cr^{52}, 1.246 MeV, E2/M1 mixing ratio 2=22708
$Cr^{52}(p', \gamma)$ 2=20614
$Cr^{52}(p, p'\gamma)$, 5.8 MeV, $\gamma-p'$ angular correl. 4=9492
Cs^{133}, $\gamma-\gamma$ correl. 1=7351
Cs^{133}, $\gamma-\gamma$ correl. of 356-82 keV cascade 0=5668
Cs^{133}, $\gamma-\gamma$ and $\gamma-K$- conversion electron correl. 1=17054
Cs^{134} decay, correl. 3=17440
$Cs^{136}\rightarrow Ba^{136}$, $\gamma-\gamma$ and $\beta-\gamma$ correlation 1=3418
Cs^{137} fallout, dose at air-ground interface 0=9599
Cs^{137}, plane isotropic source in air, calc. 4=17062
$Cu^{64}(p, p'\pi^\circ: \pi^\circ\rightarrow 2\gamma)$, meas. 4=28027
$Dy^{155, 157}$, oriented in Nd ethylsulphate 1=10958
Dy^{160}, angular correl. of γ-cascades 0=11377
Dy^{160}, $\gamma-\gamma$ ang. correl. 2=14059
Dy^{160}, $\gamma-\gamma$ cascades, effect of paramagnetism 1=9834
Er^{166}, ang. correl. 3=17419
Er^{166}, $\gamma-\gamma$ cascades, effect of paramagnetism 1=9834
Eu^{145}, $\gamma-\gamma$ coincidences 3=8044
$Eu^{145, 147}$, ang. correls. 4=6237
Eu^{146}, directional correl. meas. 3=4596
Eu^{147} decay to Sm^{147}, $\gamma-\gamma$ correl. 4=27997
Eu^{148}, $\gamma-\gamma$ directional correl. 2=10023
Eu^{150} decay, ang. correl. meas., coincidences 2=14000
Eu^{152}, $\beta-\gamma$ correlation 0=13199, 20411
Eu^{152}, $\beta-\gamma$ ang. correl. 1=659
Eu^{152}, $\beta-\gamma$ correlation 1=7348
Eu^{152}, $\beta-\gamma$ correl. 3=2412
Eu^{152}, $\beta-\gamma$ directional correl. 0=5705
$Eu^{152, 154}$, $\gamma-\gamma$ ang. correl., spin sequence and multipole mixing ratio 0=17554
Eu^{152m}, $\beta-\gamma$ correl. in 9.2 hr decay to Gd^{152} 344 keV state 4=3612
Eu^{152m}, directional and polarization correl. of $\gamma-\gamma$ cascades following decay 0=4069
Eu^{154}, $\beta-\gamma$ correlation 1=10987
Eu^{154}, $\beta_1-\gamma_1$ correlation 2=10057
Eu^{154}, $\beta-\gamma$ directional correlation 2=406
F^{19}, inelastic neutron scatt. at 2.56 MeV 0=7605
F^{19}, 198 keV, differential anistropy meas. 4=17039
F^{19}, 1.35 and 1.46 MeV levels decay 4=12138
F^{19}, 6.27 MeV 0=2661
$F^{19}(d,\alpha)O^{17}$ 1=9875
$F^{19}(d,p)F^{20}$ 1=9875
$F^{19}(He^4, p\gamma)Ne^{22}$, $p-\gamma$ correl., rel. to Ne^{22} levels 4=15150
$F^{19}+p$ reactions, 483 - 597 keV 3=15193
$F^{19}(p,\alpha)O^{16}$ 1=9875
in $F^{19}(p, \alpha)O^{16}$ reaction 0=7560
$F^{19}(p, \alpha\gamma)O^{16}$, resonances 2=5910
from $F^{19}(p, \gamma)Ne^{20}$, resonances, 550-1500keV 2=1888

Gamma-rays—contd
angular distribution—contd
F^{20}, $\beta-\gamma$ correl. 2=10048
Fe, from Cs^{137} unidirectional source 4=9155
Fe, from neutron inelastic scattering 0=20502
in Fe, scattered rays 1=5703
Fe^{56}, $\gamma-\gamma$ correl., rel. to spin and parity 4=22024
Fe^{56}, ang. correl. 1=668
Fe^{56}, from decay of Co^{56} 4=19719
Fe^{56}, 1st excited state, $\gamma-\gamma$ ang. correl. 3=17407
Fe^{56}, inelastic neutron scatt. at 2.56 MeV 0=7605
$Fe^{56}(n,n'\gamma)$, 1.37 MeV 4=12232
$Fe^{56}(n,n'\gamma)$, at 2.0 MeV, $n'-\gamma$ ang. correl. 2=20641
$Fe^{56}(p',\gamma)$ 2=20614
$Fe^{56}(p'-\gamma)$ ang. correl. meas. 2=5902
$Fe^{56}(p,p'\gamma)$, 5.8 MeV, $\gamma-p'$ angular correl. 4=9492
Fe^{57}, excited level decay 0=17561
Fe^{57}, $\gamma-\gamma$ coincidences of 132 keV ray preceding 14.4 keV state formation and its decay radiation 0=17488
Fe^{57}, neutron-capture γ-rays 1=8609
Fe^{58}, rel. to Co^{58} props. 0=11307
Fe^{58}, second 2^+ level decay, $\gamma-\gamma$ correl. 4=15159
Fe^{59}, $\beta-\gamma$ ang. correl. 0=15550
Fe^{59}, $\gamma-\gamma$ ang. correl. meas. of 0.337 → 1.10 MeV cascade 4=1043
Ga^{72}, $\beta^-\gamma$ correl. analysis, nuclear size effects 4=9452
Ga^{72}, $\beta-\gamma$ directional correl. anistropy, energy var. 4=6280
Ge^{77}, directional correl. meas. 4=3604
Gd, from positron annihilation, rel. to electronic struct. 4=17413
Gd^{152} 0=4069
Gd^{152}, $\gamma-\gamma$ ang. correl. 1=19407
Gd^{152}, rel. to K conversion electrons 3=17417
Gd^{153} 1=615
Gd^{154}, $\gamma-\gamma$ cascades, correlation 1=10956
$Gd^{154, 156}$, first 2^+ state, ang. correl. in aq. soln. and molten chloride 3=628
Gd^{156}, $\gamma-\gamma$ correl. 1=5877
Gd^{159} decay and Tb^{159} levels, $\gamma-\gamma$, $\beta-\gamma$ coincidences 3=22340
Gd^{159}, $\gamma-\gamma$ ang. correl. 2=18307
Ge^{74}, ang. correl. 2=16321
in He^3 liquid 1=16735
in He^3 liquid 2=22471
Hf^{177}, $\gamma-\gamma$, and $\gamma-\beta$ correlations 2=3524
Hf^{178}, correlation of $\gamma-\gamma$ cascades 1=10992
Hf^{180m}, $\gamma-\gamma$ ang. correl 1=19410
Hf^{180m}, three cascades, $\gamma-\gamma$ correl. 3=6179
Hf^{181}, $\gamma-\gamma$ correl., attenuation in $Hf(NH_4)_2F_6$ crystal 4=6684
Hf^{181} 133-482 keV cascade correl., var. liquid sources 4=25320
Hg^{197m}, ang. correl. in conversion electrons$-\gamma$-cascade, time-dependent attenuations 1=3421
Hg^{197m} $\beta-\gamma$ correlation studies 1=9839
Hg^{198}, 675-412 keV correl. precession in Fe−Au (0.5 wt.%) and g factor 4=15170
Hg^{199}, $\gamma-\gamma$ ang. correl., mag. moment of 158 keV state 2=1776
Hg^{203} decay, $\beta-\gamma$ directional correl., var. with β energy 4=6296
Ho^{165}, 279-716 keV cascade, correl. meas. 4=25319
Ho^{166}, ang. correl. 3=17419
Ho^{166} decay, differential correl., 1380-81 keV cascade, statistical perturbation effects 3=22343
Ho^{166}, $\gamma-\gamma$ correl. in mag. field, Er^{166} gyromagnetic ratio 1=2160
Ho^{166}, 1380-80 keV decay correl. 4=12157
Ho^{166m}, aligned in Nd ethyl sulphate 0=15561
I^{129}, rel. to 26.8 keV state 4=15163
I^{131}, anisotropy due to nuclear alignment at 0.03°K 1=616
$In(n,\gamma)$ using polarized neutrons, parity conservation 0=2684
In^{111}, in Ag, effects of cold work and irrad. 4=22463
In^{114m}, $\gamma-\gamma$ correlation 1=7352
In^{114m}, 192 keV, in In−Fe alloys 0=13115
In^{115}, $\gamma-\gamma$ correl. 3=7999
In^{116} decay 2=12145
$K^{39}(p,\gamma)Ca^{40}$ 2=20620
$K^{39}(p,\gamma)Ca^{40}$ correl. and Ca^{40} spin, 2, 3, 4th excited states 3=19776
$K^{41}+p$ reactions 2=450

Gamma-rays—contd
angular distribution—contd
K^{42} 1=7356
Kr^{85}, $\beta-\gamma$ correlation 1=13724
Kr^{85}, $\beta-\gamma$ correl. in resonance 1=17037
Kr^{82}, from Br^{82} β decay, 2430 keV level, γ correls. 4=12150
Kr^{82} decay 4=22030
La^{140}, $\beta-\gamma$ correlation 2=14028
La^{140}, $\beta-\gamma$ correl. 3=24904
La^{140}, $\beta-\gamma$ correl. analysis, nuclear size effects 4=9452
La^{140}, $\beta-\gamma$ directional correl. anistropy, energy var. 4=6280
La^{140}, coincident $\gamma-\gamma$ correl. 4=3575
$Li^{6,7}(p,p'\pi^\circ;\pi^\circ\rightarrow 2\gamma)$, meas. 4=28027
Li^{7*}(0.478 MeV) → Li^7, anisotropy for parity nonconservation calc. 2=418
$Li^7(\alpha,\gamma)B^{11}$ 0=20467
$Li^7(d,p\gamma)Li^8$, at 1.9-3.3 MeV 2=18349
from $Li^7(p,\gamma)Be^8$ 1=19471
$Li^7(p,\gamma)Be^8$, 1.5-11 MeV 3=22378
$Li^7(p,\gamma)Be^8$ reaction, meas. for Ep = 200-1100 keV 1=694
$Li^7(p,\gamma)Be^8$, resonance and nonresonance radiation interaction 1=3448
$Li^7(p,\gamma)Be^8$, 2.5 to 9 MeV 3=19845
Lu^{170}, $\gamma-\gamma$ coincidence 0=20391
Lu^{171}, $\gamma-\gamma$ coincidences 1=649
Lu^{172} cascades, ang. correl. 3=15122
Lu^{172}, $\gamma-\gamma$ coincidence 0=9570
Lu^{175}, 343 keV level transition, ang. distrib. 2=7954
Lu^{177}, $\beta-\gamma$ correlation 0=4030
Lu^{177}, $\beta-\gamma$ correl., energy depend., rel. to theory 2=7947
Mg 2=13999
Mg, from neutron inelastic scattering 0=20502
Mg^{24}, after beta-decay of Na^{24} and Al^{24} 4=17090
Mg^{24}, 4.24 MeV distrib. and correl. 0=11383
Mg^{24}, $\gamma-\gamma$ correl., rel. to spin and parity 1=13729
$Mg^{24}(\alpha,\gamma)Si^{28}$, rel. to isobaric spin selection rules 1=8772
$Mg^{24}(d,p\gamma)Mg^{25}$, $p-\gamma$ ang. correl. 0=17604
$Mg^{24}(n,n'\gamma)$, medium energy 2=14103
$Mg^{24}(n,n'\gamma)$, 1.24 MeV 4=12232
Mg^{24}, $p'-\gamma$ ang. correl. in proton inelastic scatt. at 16.6 MeV 0=5745
$Mg^{24}(p,p'\gamma)$, rel. to proton spin flip 4=17123
Mg^{24}, resonant scatt. 1=13763
$Mg^{25}(p,\gamma)Al^{26}$ 1=7377
$Mg^{26}(p,\gamma)Al^{27}$ 3=4567
$Mg^{26}(p,\gamma)$, ang. correl. meas. 2=7982
$Mg^{26}(He^4,n\gamma)Si^{29}$, ang. correl. 0=15583
Mg^{27} decay, from MgO + d, 9 MeV, coincidence, absence of 0.84-0.81 MeV or 0.84-1.01 MeV cascades 3=24892
$Mn^{52,56}$, oriented, ang. distrib. and circ. polarization 0=4076
Mn^{52m}, oriented in crystal lattice 0=20326
Mn^{54}, oriented in antiferromag. $CoCl_2H_2O$ 2=23687
Mn^{54}, oriented in crystal lattice 0=20326
Mn^{54}, oriented in $MnSiF_6 \cdot 6H_2O$ 2=23037
Mn^{56}, aligned nuclei in Ni fluosilicate crystal 0=9515
Mn^{56}, $\beta-\gamma$ correl. 2=10048
Mo^{94}, $\gamma-\gamma$ ang. correl. 1=9833
Mo^{95}, $\gamma-\gamma$ directional correl. 2=18261
$Mo^{95}(n,\gamma)Mo^{96}$, $\gamma-\gamma$ ang. correls. 3=6268
Mo^{96}, ang. correl. meas. 3=4591
N^{14} 1=5867
N^{14}, 9·17 MeV state, g.s. ray and $\gamma-\gamma$ cascade 1=10971
$N^{14}(p,\gamma)$, 800 MeV, non-resonant radiation 4=9507
$N^{14}(p,\gamma)O^{15}$, (γ,γ) ang. correl. 0=9631
$N^{14}(p,\gamma)O^{15}$, O^{15}, 7.56 MeV level 1=12155
Na^{22}, $\beta-\gamma$ correlation 0=7515
Na^{22} decay, $\beta^+-\gamma$ ang. correlation 1=13725
$Na^{23}(n,\gamma)$, at 1.5 MeV 2=14107
$Na^{23}(p,\gamma)Mg^{24}$, 300-800 keV, $\gamma-\gamma$ ang. correls. 3=12670
$Na^{23}(p,p'\gamma)Na^{23}$ 1=11014
Nb^{95}, $\beta-\gamma$ correl., isospin conservation 2=10049
Nd^{144}, $\gamma-\gamma$ polarization ang. correls. 3=12633
Nd^{147}, $\gamma-\gamma$ coincidences 1=17040
Nd^{147}, $\gamma-\gamma$ directional correl. 1=8649
Nd^{147}, by orientation in Nd ethylsulphate 1=12147
$Ne^{20}(d,n\gamma)Na^{21}$, $n-\gamma$ ang. correls. 3=10377
$Ne^{20}(p,p'\gamma)Ne^{20}$ 2=1808
$Ne^{20}(p,p'\gamma)$ 1.63 MeV, $p-\gamma$ ang. correl. 0=11410
$Ne^{20}(p,p'\gamma)$, ang. correls. at 1.63 MeV 4=1076

Gamma-rays—contd
angular distribution—contd
Ne^{22}, ang. correl. from 3.34 and 4.47 MeV cascades 4=22018
Ne^{22}(α,nγ)Mg^{25}, γ—n angular correlation 1=11037
Ni^{58}(p, p'γ), rel. to proton spin flip 4=17123
Ni^{58,61,63}, $\gamma-\gamma$ correl., rel. to spin and parity 4=22024
Ni^{60}, γ-γ ang. correl. 0=15556
Ni^{60}(n, γ)Ni^{61}, $\gamma-\gamma$ ang. correl. rel. to Ni^{61} level 4=15225
Ni^{60}(p, p'γ), 4.4 to 5.0 MeV 3=10343
Ni^{62}(p,p'γ—γ) ang. correl. meas. 3=17408
Ni^{65}, 2.6 hr, γ—γ coincidences 1=655
O^{16}(α, γ)Ne^{20}, 4.8 to 9.9 MeV 4=22187
O^{16} (He^3, p) F^{18}, p—γ coincidences 1=7323
O^{16}(p, p'π°; $\pi^\circ \rightarrow 2\gamma$), meas. 4=28027
O^{16}(t,pγ)O^{18}, p—γ ang. correls. 3=10392
O^{18}(α,nγ)Ne^{21}, γ—n angular correlation 1=11037
O^{18}(p, γ)F^{19}, 1167 MeV 3=19843
Os^{188,190,192}, first excited 2$^+$ states 4=25322
P^{31} 2=13999
P^{31}, first two excited states 4=3599
P^{31}, 7.77 MeV level decay, polarization correl. and 3.13 MeV level spin and parity 4=22022
P^{31}(p, γ)S^{32} 2=10103
P^{31}(p,γ)S^{32} 3=6242
P^{31}(p,γ)S^{32} 3=7989
P^{31}(p,γ)S^{32} and S^{32} levels, spin and parity 3=22377
P^{31}(p,γ)S^{32}, 355 and 439 keV resonances 3=8090
Pa^{231} family, $\gamma-\gamma$, $\alpha-\gamma$ angular correlations 2=410
in Pb, scattered rays 1=5703
Pb, 662 keV γ, inelast. scatt. by K electrons 2=1967
Pb^{207} (p, p' π°, $\pi^\circ \rightarrow 2\gamma$), meas. 4=28027
Pb^{208}, cascade, ang. correl. 1=17061
Pb^{208}, neutron inelastic scatt., 2·6 MeV γ-ray 1=17127
Pb^{211}, 426–404 keV cascade, $\gamma-\gamma$ correl. 4=15171
Pb^{211}, $\gamma-\gamma$ ang. correl. 2=20549
Pb^{212}, correlations 1=2197
Pd^{108,110}, excited states 2=1818
Pm$^{143-4,146}$ 1=650
Pm^{144}, oriented in Nd ethyl sulphate 1=3587
Pm^{147}, $\gamma-\gamma$ ang. correl. 1=17041
Pm^{147}, $\gamma-\gamma$ ang. correl. for 7 cascades 0=17481
Pm^{148,148m}, γ—γ ang. correls. 3=15116
Po^{214}, 769-609 keV cascade correlation 1=19420
Pr^{144} ground state, β-decay, β—γ directional correl., energy depend. 3=19753
Pt^{188}, γ—γ coincidences 3=8053
Pt^{192}, ang. correlation 0=7536
Pt^{192}, ang. correl. rel. to nuclear states 2=5804
Pt^{192}, de-excitation, $\bar{e}$—γ ang. correls. 3=6181
Pt^{192}, $\gamma-\gamma$ correl. meas. 2=10077
Pt^{194}, ang. correl. meas. 2=10078
Pt^{194}, 1265 kEV level, ang. correl. of cascades 0=4018
Pt^{195}, excited states 0=1407
Pt^{196}, 333 keV, electron-gamma ang. correl. 2=10060
Ra^{222,224,226}, $\gamma-\gamma$ coincidences 0=13184
Ra^{223}, ang. correl. 1=13754
Rb^{84,86}, 1st-forbidden β-decays 3=22331
Rb^{86}, rel. to β-decay 2=14032
Rb^{86}, β—γ ang. correl. 1=659
Rb^{86}, $\beta-\gamma$ directional correlation 2=407
Rb^{86}, β—γ directional correl. anistropy, energy var. 4=6280
Rb^{86}, correl. with once-forbidden β-group 1=19406
Rb^{86} decay, $\gamma-\beta$ correl. 4=9449
Re^{186}, β—γ, ang. correl. polarization 2=5858
Re^{186} β—γ correlation measurements 1=9835
Re^{186}, β—γ directional correl. 3=4600
Re^{186}, γ—γ ang. correl. 1=8568
Re^{186}, 631-137 keV decay, correl. 4=12157
Re^{187}, γ—γ ang. correls. 3=22348
Re^{188}, β—γ directional correl. 3=4601
Rh^{102}, ang. correl. 3=15147
Rh^{102} → Ru^{102}, rel. to Ru^{102} spins 1=13755
Rh^{103}, γ—γ correlations 1=4851
Rh^{105}, γ—γ directional correls. 3=7997
Rh^{106}, $\gamma-\gamma$ ang. correl. 0=15563
Ru^{105}, $\gamma-\gamma$ and $\beta-\gamma$ coincidences, levels in Rh^{105} 0=11357
S^{32}(p, γ)Cl^{33} 0=7565
S^{32}(p, p'γ) 2.25 MeV, p—γ ang. correl. 0=11410

Gamma-rays—contd
angular distribution—contd
Sb^{118}, 5 hr 1=2198
Sb^{118,120}, $\gamma-\gamma$ correl., mag. rotation 2=16300
Sb^{120m} 1=622
Sb^{122}, 566 keV, in Sb—Fe alloys 0=13115
Sb^{122}, following emission of 1.42 MeV β-ray 1=12173
Sb^{124}, $\beta-\gamma$ directional and circ. polarization correl. 0=11360-1
Sb^{124}, β—γ directional correl. in decay to Te^{124} 1=3420
Sb^{124}, cascade, ang. correl. meas. 4=6263
Sb^{124}, 2·31 MeV β-transition, $\beta-\gamma$ correl. 1=17034-5
Sb^{125} decay, ang. correl. and Te^{125} spin of high levels 4=19695
Sc^{44} 1=7356
Sc^{44}, $\beta-\gamma$ correl., isospin conservation 2=10049
Sc^{46}, $\beta-\gamma$ circular polariz. correl. 4=3601
Sc^{46}, in Fe alloy, polarized, effective mag. field 0=20787
Sc^{46}, γ—γ, β—γ directional correls. 3=22328
Se^{76}, ang. correl. 1=668
Se^{77}, and spin, 246 keV level 4=1016
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Cu, and crystal point defects, due to α-rays and cold working, temp. var. 3=17816
Cu, rel. to Fermi surface 1=19834
Cu, $< 15°$K 1=7622
Cu, four Hall constant anisotropies, rel. to theory 1=19835
Cu$_3$Au, influence of ordering 3=839
Cu$_3$Au alloy, rel. to ordering process 3=3331
Cu$_3$Au, plastic deformation increase 4=22669
Cu$_3$Au, after quenching, long-range order 3=20889
Cu$_3$Au, temp. depend. rel. to order-disorder 2=6419
Cu-base binary solid solns., effect of scattering 4=17472
CuFeS$_2$ 3=1027
CuFeS$_2$, temp. dependence 1=19872
Cu–M alloys (M = Mn, Fe, Co, Ni, Zn, Sn, Si, Ge), composition depend. 0=4319
Cu–Mn, anomalous effect, field and temp. depend. 0=17991
Cu–Mn, temp. depend. 0=20868
Cu$_2$O, rel. to defect structure 3=22735
Cu phthalocyanine, rel. to carrier mobilities 4=6994
Cu$_2$Sb, 2.5°-300°K meas. 4=15520
Cu–Sn 1=7622
Dy, 4·2-350°K 3=25322
Er, 4·2-350°K 3=25322
Fe, effect of metallic impurities 1=10031
Fe, effect of small amounts of neighbouring elements 2=21102
Fe films, mag. field depend. 2=23241
Fe, temp. depend. 2=21103
Fe, temp. depend. down to 4.2°K 0=6075
Fe alloys, effect of small admixtures 1=6128
Fe–Co alloys, Co conc. depend. 1=3714
Fe–Ni alloys 0=6081
Fe–Ni alloys, rel. to elec. cond. 4=26011
Fe–Ni, Hall e.m.f., Ni conc. depend. 4=13184
Fe–Ni, temp. and magnetization depend. 4=12858
Fe$_3$O$_4$ 1=11265
FeS measurement 1=12418
Fe–Si, extraordinary and ordinary effect 1=3720-1
Fe–Si, Hall e.m.f., Si conc. depend. 4=13184
Fe telluride measurement 1=12418
Fe–V alloys, room and liq. N temp. 4=1564
Ga films 3=17875
Ga, high-field, rel. to Fermi surface topology 2=12400
Ga, liq., meas. 3=1710
Ga, molten 3=9475
GaAs, anomalous behaviour 0=18046
GaAs, doped with Mn 2=14553
GaAs, rel. to elec. fld, 4°-30°K 3=10813
GaAs, field dependence, in carrier scattering study 1=17731
GaAs films 1=20668
GaAs, high-resistivity 2=23392
GaAs, Li diffusion effects 4=15537
GaAs, n-type, impurity band conduction 2=18704, 23391
GaAs, n-type, mobility, rel. to annealing and irrad. 2=23387
GaAs, p-type with Cu, Zn, Cd impurities, 2° to 300°K 2=23388
GaAs, p-type, grown from vapour phase 1=20418
GaAs, p-type, Hall mobility 0=11711
GaP, p-type, mobility and scatt. mechanism 2=12528
GaAs, photo-Hall effect 2=8408
GaAs, photo-Hall effect in high-resistivity crystals, temp. depend. 3=6632-3
GaAs, strongly degenerate 0=13612
GaAs, 2-600°K 1=14467
GaAs, rel. to vacancies on removal of Cu impurity 4=12726
GaAs:Cu crystals 1=12446
GaAs–GaP alloys, mobility 4=4546
GaAs–Ga$_2$Se$_3$ solid solutions 1=19877
GaAs–Ga$_2$Se$_3$ system 0=11712
GaAs–InAs, as function of temperature 1=10026
Ga arsenoselenides, 500-1000°K 1=3766

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Ga, arsenoselenides, at high temp. 0=15955
GaP, 78°-100°K 3=17879
GaP, 100°-400°K 0=11713
GaSb, doped with Se 2=2162
GaSb, Hall constant, 150–950°K 0=15954
GaSb, n-type 3=10819
GaSb, n- and p-type 1=17733
GaSb, n-type, rel. to press., 200°–400°K 1=17735
GaSb, p-type 2=18703
GaSb, 200°-400°K 0=6119
GaSb–Ga$_2$X$_3$ alloys, (X = Se, Te), Hall coeff. rel. to comp. 4=28997
GaSe, rel. to temp. 4=12879
Ga$_2$Te$_3$ 1=17744
Ga$_2$Te$_3$ (59.5-60.0 at.%) Te 3=10815
Gd, anomalous, rel. to f–cond. electron coupling 3=8400
Gd, ferromag., origin 3=15556
Gd, 0°-370°K 3=8497
Ge, anisotropy, 77°-300°K 3=10777
Ge, carrier concentration discrepancy, rel. to impurities 3=17861
Ge, cleaned surfaces, 1.7° to 300°K 2=23333
Ge, Cu-doped 2=8407
Ge, effect of X-rays 1=19849
Ge, effect of X-rays 2=4064
Ge rel. to electron-irrad. 3=22859
Ge, external elec. field effects 0=15923
Ge, on fast neutron bombard. 4=10012
Ge, in fields up to 400 kOe 0=9960
Ge films, constant and mobility, rel. to substrate temp. during deposition, thickness and temp. 4=20806
Ge films, mag. field depend. 1=3748
Ge, grain boundaries at low temps. 2=18677
Ge, heavily doped n-type 1=14445
Ge, hot carrier mobility, temp. depend. 1=6150
Ge, in-pile meas., fast neutron bombard. 0=18016
Ge layers, rel. to thickness 2=21140
Ge, at low temp 0=6108
Ge, measurement 1=11296
Ge, at microwave frequency 1=17702
Ge, molten 3=9475
Ge, n-type, anisotropic 1=12436
Ge, n-type, anisotropic coeffs. 2=23318
Ge n-type bicrystal, coeff. at grain boundary 3=8506
Ge, n-type, for current flow along tilt and twist grain boundaries 3=854
Ge, n-type, degenerate, stress effects, as valley splitting 3=10787
Ge n-type, effect of deformation 0=13596
Ge, n-type, field depend. in impurity conduction range 1=7640
Ge, n-type, hot electron mobility, theory 4=6970
Ge, n-type, rel. to neutron-irrad. 2=6453
Ge, n-type, press. depend. 0=584
Ge, n-type, surface channel rel. to free-carrier scatt. 2=23334
Ge n-type, transitory elec. props. after neutron pulse 0=13597
Ge, during n- to p-type transitions 1=17678
Ge, n- and p-type, 24 Gc/s, rel. to theory 1=19852
Ge, rel. to neutron-irrad. 2=23325
Ge, n irrad., 14 MeV, n-type, and crystal imperfection distrib. 4=6822
Ge, oxygen doped 2=2146
Ge, p-type, concn. depend. 4=12901
Ge, p-type, external elec. field and temp. depend. 1=14451
Ge, p-type, mag. field depend. 2=8328, 14533, 18674
Ge, p-type, rel. to mag. field strength 2=635
Ge, p-type, mag. field and temp. depend. 1=19850
Ge, p-type, press. depend. 0=585
Ge, p-type, in pulsed mag. fields, concentration effect 1=1046
Ge, p-type semiconductor, isothermal, and rel. to hole concentration 2=4015, 8326
Ge, p-type, sign reversal at 5°K 1=14384
Ge, path length effects, space-charge zone of bicrystal 4=17489
Ge, planar, n and p-type, heavily doped 4=4154
Ge, point defect study in p-type 2=6449
Ge, Sb- and As-doped, rel. to compression, 1° to 300°K 3=22931

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- Ge, 2nd and 3rd Cu levels, activation energies rel. to temp. 3=17849
- Ge, surface, after ion bombard. and annealing 2=3894
- Ge, rel. to surface state 1=17686
- Ge, temp. dependence, rel. to neutron-produced energy levels 4=1433
- Ge, temp. variation rel. to acceptor activation energy 2=4018
- Ge, 30 Gc/s, by coupled waveguides, and mobilities 4=20349
- Ge, voltage measurements, a.c. method 1=12419
- Ge, Zn-doped, 5°-250°K 4=6957
- Ge: In, field depend. 1=3749
- Ge:Li, low temp. depend. 1=3751
- GeSe, (100°–800°K) 1=8953
- Ge–Si alloys, 20-900°C 0=18022
- GeTe, carrier compensation for various solutes 3=25365
- Hf borides, carbides and nitrides 1=3707
- Hg, liquid 3=144
- Hg, liquid 3=9475
- Hg, liquid, d.c. results 3=16636
- Hg liquid and solid, coefficient, measurement 1=8134
- Hg, liquid and solid, temp. depend. 1=4356
- Hg, meas. 3=7218
- Hg[Cd]Te–$In_2[Ga_2]Te_3$, solid solutions 3=11301
- Hg–In, alloy, liquid 3=9476
- $HgIn_2S_4$ 1=10066
- HgSe, 77° to 350°K 1=17754
- HgSe, 90° to 500°K 1=17752
- HgSe–HgTe, Hall mobility 1=17753
- HgSe–HgTe, 77° to 350°K 1=17754
- HgTe 2=8367
- HgTe, doped and undoped, 77°-400°K 4=10063
- HgTe, 100°-320°K 4=7087
- HgTe, 100°-400°K 4=4163
- HgTe–CdTe, rel. to composition 3=17890
- Hg Te–Cd Te solid solutions, rel. to vacancy study 4=28998
- In 0=9945
- In, at 4·2°K, in high field 3=840
- In, liquid 3=144
- In, liquid, d.c. results 3=16636
- In, liquid, meas. 3=7218
- InAs, evap. layers 1=19882
- InAs generators for l.f. mag. field meas. 2=7704
- InAs, at liq. N_2 temperatures 4=10057
- InAs, at low temps. 2=23398
- InAs, at low temps. 3=6596
- InAs, for mag. field meas. up to 34 kG 4=24784
- in InAs magnetic field probe 1=16480
- InAs, n-type, in pulsed magnetic field, 20–360°K 2=4038
- InAs, n-type, in pulsed magnetic field, 20°-360°K 3=4925
- InAs, up to 180 kOe 1=1077
- InAs, p-type 2=18707
- InAs, use for mag. field meas. 0=6123
- InAs–CdTe alloys, n-type, up to 400°C 4=22717
- $In(As_{0.8}P_{0.2})$, up to 180 kOe 1=1077
- InP, photo-Hall effect 2=8408
- InSb 1=17621
- InSb, anomalous behaviour 0=18046
- InSb cells 1=7653
- InSb, rel. to dislocations 2=18580, 21030
- InSb, 80°-500°K, in n- and p-type 4=26048
- InSb element, thermal time const. meas. circuit 4=6978
- InSb, evap. layers 1=19882
- InSb, in fields up to 450 kOe, 20°-300°K 4=6977
- InSb films, rel. to annealing 4=20808
- InSb, high elec. field 0=610
- InSb, in high mag. fields, rel. to doping 2=16727
- InSb, hot electrons, drift velocity meas. 3=8386
- InSb, and inducible scatt. centres 2=12531
- InSb, rel. to mag. fld. intensity 3=17881
- in InSb, for mag. field spectrum analyzer 4=30014
- InSb, mag. field and temp. depend. 0=609, 18044
- InSb, in mobility measurement 1=10030
- InSb, n-type 0=15956
- InSb, n-type, in high elec. fields, at 77°K 0=20917
- InSb, n-type, 0°-100°K 1=14469
- InSb, n-type, 4°-100°K 1=17739
- InSb, n-type, oriented single crystals 1=6159
- InSb, up to 180 kOe 1=1077
- InSb, 195–715°K 1=7649
- InSb, p-type, temp. and mag. field depend. 0=15957

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- InSb, pulse technique meas. 4=30538
- InSb rectangular elements, influence on transverse magnetoresistance 1=14468
- InSb, Se doped, independent of mag. field, 0.1-22 kOe 3=17883
- InSb, 77-450°K, 25-25kOe 3=25367
- InSb, temp. depend. 1=14470
- InSb, at 2°-78°K 0=15958
- InSb, zone refined 0=1669
- InSb–GaSb, equimolecular, elec. props. temp. depend. 0=15959
- InSb–GaSb, temp. depend. 0=611
- InSe, 300°-600°K 3=13073
- In_2Te_3 1=2415
- In_2Te_3 1=17744
- In_2Te_3, with defect struct. 2=23399
- K, at 4·2°K, in high field 3=840
- KBr, photoconductive 1=14385
- KCl, electron mobility down to 4°K 2=23472
- KCl, photoelec., in additively coloured crystals, 4-114°K 1=5028
- K cyanides of Fe, Mn and Ni 0=4372
- $LaCoO_3$, doped with Sr or Th 2=23400
- Li, at 4·2°K 3=840
- Mg–Cd 1=14531
- Mg–Cd, rel. to Cd concentration 1=12417
- $Mg_2Ge_x Si_{1-x}$, 250-600°K meas. 3=13142
- Mg_2Si, rel. to elec. props. 2=16761
- Mg_2Si, n- and p-type 2=23404
- Mg_2Si–Mg_2 Sn solid soln. 2=8453, 14593
- $MnAu_2$ 2=8291, 10441
- $MnAu_2$, effects of magnetic field and magnetization 1=10029
- $MnAu_2$, temp. depend., "additional" effect 1=14386
- $MnAu_2$, temp. and mag. field depend. 2=23243
- $Mn_{2-x}Cr_xSb$, changes rel. to mag. transitions 4=1617
- Mn ferrite, near Curie temp. 0=7935
- Mn ferrites 1=17627
- $Mn_{1.16}Fe_{1.84}O_4$, heat treatment depend. 3=22949
- Mn_5Ge_2 ferrimagnet, near compensation point, expt. and theory 4=26053-4
- Mn–Ni, Hall const. sign change, during ordering 0=1619
- Mn phosphides 0=1674
- MnSb alloy 1=17622
- Mn–Sb alloys, rel. to applied field, ferromag. and non-ferromag. phases 0=566
- MnTe, Cr-doped 2=18700
- Mo borides, carbides and nitrides 1=3707
- Mo–Ti alloy, b.c.c., variations 2=2115
- Na, coeff. from magneto-plasma resonances 2=18559
- Na, at 4·2°K, in high field 3=840
- Na, molten 3=9475
- NaCl, 610-780°C, ionic 1=1025
- Nb borides, carbides and nitrides 1=3707
- Nb–Zr alloy, supercond. and normal 3=13043
- Ni 1=11265
- Ni, anisotropy, crystal symmetry 3=841
- Ni films 0=13813
- Ni films 1=7618
- Ni films, Curie temp. determination 0=673
- Ni films, formation, effect of elec. field 0=8283
- Ni films, room and liquid N temps. 4=12862
- Ni and Ni–Fe alloys, residual resistivity 4=20324
- Ni, temp. depend. 2=21103
- Ni, temp. dependence down to 4.2°K 0=6075
- Ni thin films, e.m. force 2° to 300°K 3=832
- Ni, thin films, at 300°K 2=3985
- Ni, thin films, at 300°K 3=4905
- Ni thin layers, rel. to ferromag. Curie pt. 3=1077
- Ni alloys 1=11265
- Ni alloys, extraord. Hall conductivity 3=15551
- Ni–Cu–Fe alloys, rel. to number of cond. electrons 1=14363
- Ni–Cu–Fe alloys, ordinary and extraordinary, meas. 4=10031
- Ni–Fe dilute alloys at low temp. 2=6420
- Ni–Fe films, ordinary-extraord. transition 3=22907
- Ni–Fe films, room and liquid N temps. 4=12862
- Ni ferrite 1=11265
- Ni_3Mn, effect of order 2=6422
- Ni_3Mn, temp. depend. 0=18398
- NiO measurement 1=12418
- Ni–Pd alloys, 4-300°K 0=20869

Hall effect—contd
Ni telluride measurement 1=12418
NiZn ferrite, near Curie temp. 0=7935
P, black, crystalline 3=17891
P, rel. to thermal cycling 4=10436
Pb films, rel. to resistivity and crystal structure 2=6470
Pb films, vacuum evaporated 2=8282
Pb, liquid, d.c. results 3=16636
Pb, liquid, meas. 3=7218
PbS film, single-crystal, mobility 4=23582
PbS films 1=1080
PbS layers, mono- and polycryst. 4=26051
PbSe, rel. to impurities, 90° to 430°K 2=23401
PbSe, mobility, rel. to controlled deviation from stoichiometry 3=22736
PbSe, Pb^- and Se^- saturated 2=2168
PbSe, vapour-grown single crystals 1=3771
PbTe, coeff., rel. to carrier conc. and temp. 3=867
PbTe, impurity influence 1=19729
PbTe, impurity influence 2=3857
PbTe, n-type 1=17747
PbTe, near-intrinsic 2=10491
PbTe, oscillations in strong mag. fields 1=17617
PbTe, p-type, impurity levels 4=15540
PbTe, p-type, rel. to mobility 2=6467
PbTe, p-type, at 90°K 0=20920
PbTe, p-type, rel. to temp. and press. 1=17735
PbTe, p-type, rel. to valence bands 1=17749
PbTe, rel. to temp. 77° to 900° K 1=17750
PbTe thin films 4=23583
PbTe–SnTe system alloys 4=23275
Pd, role of hydrogen atoms 3=25749
Pd–Co–H dilute alloys, contrib. from ferro- and paramagnetism 1=14383
Pu, α and δ phases 2=625
Pu, α-phase, 78°-388°K 3=17824
S, orthorhombic, charge transport, 180°-370°K 4=30541
Sb, molten 3=9475
Sb_2Te_3 films meas. 3=8514
Sb_2Te_3, temp. depend. 2=8351
Sc, temp. depend. 4=26013
Se, vitreous, photo-Hall effect, n-type cond. 4=22805
Si, carrier concentration discrepancy, rel. to impurities 3=17861
Si, coeff. when Ni-doped 4=4173
Si rel. to electron-irrad. 3=22859
Si films, rel. to heat treatment 2=16709
Si, after γ-irrad. 4=6788
Si, heavily doped, electron mobility 3=25347
Si, heavily doped, 15° to 300°K 0=11697
Si, heavily doped, temp. depend. 4=4171
Si, Hall mobility and μ_H/μ_D, temp. depend. 4=15542
Si, mag. field depend. 0=1647
Si, n-type, γ-irradiated 0=11701
Si, n-type, model 1=1069
Si, n-type, piezo-effect 3=15582
Si, n-type, plastically deformed, low field 1=8950
Si, P-doped, rel. to energy level structure and electron mobility 0=1653-4
Si-p-type, effect of deformation 0=13596
Si, photo-Hall effect 2=8408
Si, pure, measurement 0=11698
Si, rel. to recombination velocity 1=17709
Si, study of energy levels of radiation defects 2=18688, 23362
Si, zone-refined, p-type, in-pile coeff. 3=17867
SiC p-type, up to 1300° K 1=17716
Si:Li, temp. depend., radiation defects study 3=22849
Sn, anisotropy, 4.2°K, up to 7kG 1=3717
Sn(grey), oriented single crystals, 77-273°K 1=8960
Sn, Hall field 4=17583
Sn, liquid 3=144
Sn in strong mag. fields 3=15555
α-Sn, theory 4=6790
Sn–Cu alloys, quenched films, Cu conc. depend. 1=3725
SnO_2 films, temp. depend. 1=10051
SnO_2, Sb-doped thin layers, Hall const., temp. depend. 0=16036
SnO_2, semiconducting 0=15965

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SnSe, n-type Sb-doped 1=17761
SnTe, meas. rel. to stoichiometry 3=6604
$SrTiO_3$, 4.2°-300°K meas. 4=15559
Ta borides, carbides and nitrides 1=3707
Te 1=8958
Te, anomalous temp. depend., theory 0=6127
Te, coeff., sign inversions 4=12916
Te deposited films, variation with thickness 1=19885
Te, doped with Bi, intrinsic and extrinsic regions 1=17448
Te films, in modulating elec. field 4=28575
Te liquid, up to 850°C 3=9474
Te, liquid meas. 3=7218
Te, molten 3=9475
Te, molten, temp. depend., free-electron model 4=2707
Te, –100° to +200°C 2=2172
Te, and paramag. reson., 1.5-60° K 3=13308
Te, purified, rel. to structural defects 3=17898
Te:Se, Se conc. depend. 2=2173
Th, room temperature to 400°C 0=7948
Ti, effect of preferred orientation 3=22906
Ti alloys, dilute 2=15854
Ti borides, carbides and nitrides 1=3707
TiC 2=8305
TiC, 4.2° to 313°K 2=16684
TiC–TiN 2=18649
TiC_xN_{1-x}, and carrier density 4=17479
Ti hydrides, 77°-300°K 3=13026
TiO, 80°-400°K 3=17894
TiO_2 3=22955
TiO_2, partly-reduced, anisotropy, 78°-700°K 4=10072
TiO_2 (rutile), rel. to conduction mechanism model 2=23413
TiO_2 (rutile), slightly reduced, rel. to 1/T 4=15541
Ti_2O_3 1=11310
TlSe 2=18712, 23410
TlSe, temp. depend. 2=644
$Tl_2Se.As_2(SeTe)_3$, vitreous 0=15964
Ti silicides 2=8305
U, phase transition in α-type at 42°K 1=15135
U–Mo alloys 0=4320
U–Mo alloy, γ-phase, rel. to Friedel band model 1=17450
U–Nb alloys 0=4320
UO_2 single crystals, 90°-900°K 3=25372
US, 4.2-360°K 4=12842
V borides, carbides and nitrides 1=3707
VSi_2 1=2449
V_3Si 1=2449
V_5Si_3 1=2449
W borides, carbides and nitrides 1=3707
WO_3 3=13083
Zn, by He temps. meas. 3=8492
Zn, liquid, d.c. results 3=16636
Zn, at liquid He temp. 0=13581
Zn, molten 3=9475
Zn, two vector component meas. 4=28538
ZnAs, p-type 2=16724
$Zn_xCd_{1-x}Sb$, effects of doping 0=2903-4
$Zn_xCd_{1-x}Sb$ solid solns., meas. 2=23415
$ZnIn_2S_4$ 1=10066
ZnO crystals, impurity band interpretation 2=2117
ZnSb 0=15967
Zn antimonide 2=4042
ZnSb, electrical properties, rel. to temp. 3=25373
ZnSb, p-type, meas. 4=12919
ZnSe, scatt. const. 4=22726
ZnTe 3=25374
Zr borides, carbides and nitrides 1=3707

Halogens
(Heading introduced in 1961).
adsorption on metal films 1=20688
alkali halides, lattice energy, calc. 3=17627
atoms, electron affinities 3=12759
atoms, radiative electron capture 4=25493
bond character in alkyl halides 1=2341
bonds, H, halide anions as proton acceptors 3=17566
compounds, metals, heavy; luminescence 3=10990
crystals, diatomic molecular, librational motion 3=745
cyanides, mol. vibr. and thermodynamic props., calc. 4=25674
electron affinities 2=8146

Halogens—contd
- exchange reactions from gas with NaCl crystals 1=4076
- halides of group V elements, absorpt. spectra 4=6581
- halides ions in soln., u.v. absorpt. 2=19564
- halides; nuclear quadrupole resonance freqs., rel. to orbital energy matching 2=6226
- halogen cyanides, molecular vibr., bond lengths 4=9735
- inert gas halides, binding 3=4750
- ion, di, formation, in glasses, by X-rays, u. v. 4=4707
- ionic radii, calculation 1=11562
- luminescence activation in alkali earth salts 2=8549
- metal halides, far i. r. spectra 4=7117
- molecules, bond energies 2=14318
- molecules, electron affinities and charge-transfer frequency 3=8257
- molecules, gaseous, vibrational relaxation times 3=9504
- spectra, atomic, in arc in He atmosphere 4=9642
- vibrational relaxation times 4=28181
- Br_2, I_2, ICl, IBr, molec. beams, reactive scattering with K, Rb, Cs 4=28288

Hardness
- See also Abrasion; Work hardening.
- age-hardening in thin films 0=10463
- alkali halide crystals, effect of neutron irradiation 1=12588
- alkali halide crystals, rel. to point defects, 20.5°-300° K 3=23364
- alkali halides containing F-centres, hardening on illumination 4=13392
- alkali halides, γ-irrad. hardening 4=15699
- alloys, fatigue hardening, for low stacking-fault energy 3=20736
- alloys, relaxation of internal stresses 2=23744
- Armco iron, effect of electrolytic H 3=3245
- α-brass, effect of low-temperature annealing 1=1431-2
- α-brass, rel. to order—disorder phenomena 1=1418-20
- calcite, on repeated twinning 4=10373
- crystals, rel. to plastic resistance 1=1317
- diamond 3=25445
- diamond, formulae for indentation tests 1=1351
- diamond, relative hardness of hard directions 1=12609
- diamond, scratching, orientation depend. 0=1863
- diamond, type II, calc. 2=4348
- effect of non-uniformities on hardening of crystals 1=2514
- effect on rate of ultrasonic machining 1=9241
- effect on rate of ultrasonic machining 1=10358
- f. c. c. metals, hardening by fast neutrons 4=30760
- f. c. c. polycrystalline metals hardening according to Taylor's rule 4=13370
- frictional force rel. to microhardness 3=13388
- glass, hardening process, theory and exper. data 0=18382
- glass, rel. to local stresses and environment 3=18365
- glass, temp. depend. 0=8133
- glass, rel. to thickness and heat treatment 3=3229
- grain boundaries, microhardness meas. 2=12863
- graphite, defect interactions as contribution to hardening 1=7585
- graphite, irrad., and annealed 2=23766
- graphite, radiation-induced changes 0=11988
- graphite, work-hardened by abrasion 1=1352
- hardening, isotropic, by plastic flow 0=1854
- hardening due to recomb. of dislocations 1=19771
- high temp. meas. on materials with ~3000° C melting points 1=1350
- indentation meas., with electron microscope 3=20759
- indentation test, by diamond pyramid, rel. to crystal face symmetry 0=13931
- intermetallic cpds., and thermal vibrs., plastic deformation 4=28920
- irradiation hardening in f.c.c. crystals 2=21437
- magnetoplumbite 2=21449
- Magnox ZR 55, influence of H_2 pick-up 3=25761
- metal crystals, measure of twinning under load 0=18272
- metals, rel. to dislocation density 1=11209
- metals, dislocation distrib. and hardening mechanism 4=28465
- metals, effect of neutron irrad. 1=10021
- metals, hexagonal and cubic, microhardness rel. to reciprocal volume-wear rate and friction coeff. 4=13387
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Hearing

See also Ear; Speech.

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CdS, edge fluoresc. and Zeeman effects 4=4293
CdS, edge and impurity emission 0=658
CdS, edge luminesc. 2=12616, 14715
CdS, edge photoluminescence 1=9004
CdS, effect of Al traces 1=1177
CdS, and elec. cond., elec. field effects 0=1746
CdS, electric field effects on quenching and enhancement 4=15617
CdS, due to electron bomb. at 5 keV, scanning microscopy 1=7725
CdS, electron bomb., polarization of blue emission 2=23613
CdS, due to electron bombard., spectrum 2=10630
CdS, excitation intensity depend., superlinearity 0=16079
CdS, exciton annihil. radiation, polarization meas. 4=28723
CdS, exciton emission rel. to energy transport 4=13068
CdS, exciton fluoresc. 2=8559
CdS, exciton stimulation 3=10986
CdS, films, polycrystalline, heat-treatment effects 2=4133
CdS, fluorescence, at 4.2 and 77°K, exciton spectrum 0=2943
CdS, fluorescence, use in optical maser 3=526
CdS, without foreign activators, temp. depend. 2=8552
CdS, at 4.2°K rel. to excitons 2=14716
CdS, γ-irrad., defect production meas. 4=20480
CdS, green edge fluorescence meas. 4=12887

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CdS, i.r., rel. to heat treatment 3=17954
CdS, ion excitation, damage 3=970
CdS, large crystals, rel. to defects 3=17704
CdS, rel. to lattice defects and impurities, thesis 1=20014
CdS, luminescence centres, review paper 4=1526
CdS, mechanically-excited emission 0=16119
CdS, mechanism 4=4292
CdS monocrystals, effect of glow discharge 2=6600
CdS, near-i.r., electron bombardment effect 1=14653
CdS, orange luminesc. with electrolysis 2=4168
CdS, rel. to originating defects 2=8574
CdS, and photochemistry, from rise and fall curves 4=7771
CdS, polarization rel. to colour centres 2=23591
CdS, polarized 1=10090
CdS, polycrystalline layers, activation temp. depend. 4=7061
CdS, pure crystals, at 4.2°K 0=1744-5
CdS, pure, low-temp. fluorescence bands 0=11775
CdS, single crystals, absorption at band edge 0=1724
CdS, single crystals, polarized emission 0=11782-3
CdS, spectrum, comparison with electroluminescence 3=8632
CdS, temp. depend. 0=4437-9
CdS, temp. var. 4=22916
CdS, temp. variation of red and green emission 2=4169
CdS, temperature quenching, energy levels 1=6232
CdS, Te-doped, photo- and electroluminescence, mechanism study 4=28724
CdS, temp. depend., photochemistry 3=15705
CdS, trapping-state spectroscopy 3=23101
CdS, u.v. above 0°C, photochem. effects 3=3037
CdS, Zeeman splitting of exciton lines 0=533
CdS, Zeeman splitting of n=2 exciton state, direct observation of exciton motion 1=3636
CdS:Ag cathodoluminescence rel. to prep. materials 2=23616
CdS:Au 0=16096
CdS—CdSe solutions, edge photoluminescence 1=9004
CdS:V, fluorescence spectra 0=11785
CdS:V, 2μ fluorescence, excitation spectra 0=13715
CdS : V, CdSe : V, crystal fields 3=20530
CdS Zn S NaCl 2%, emission bands 2=716
CdSe, activated phosphors 0=10058
CdSe, edge photoluminescence 1=9004
CdSe, fluoresc., 77°K, polarization 2=23516
CdSe, at 77°K 1=1151
CdSe:V, fluorescence spectra 0=11785
CdSe:V, 2μ fluorescence, excitation spectra 0=13715
$CdSiO_3$, field-stimulated emission, absence below 2 x 10^5 V/cm 2=12629
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CdTe, fluorescence rel. to band splitting 1=17724
CdTe, fluorescent band-edge emission 2=8573
$CdWO_4$, decay time, ion excitation 0=1756
$CdWO_4$, deterioration rel. to ion bombardment 1=11395
$CdWO_4$, induced by α-particles rel. to temp. 2=2256
$CdWO_4$, scintillation props. 0=11347
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Ce^{3+}, in alkaline earth fluoride crystals 3=25452
$CeCl_3-PrCl_3$, mixed crystals, fluorescence 3=15706
$Cf^{3+}(5f^9)$ in $LaCl_3$, self-luminesc. 2=2248
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CoO, visible radiation emitted by electron bombard., spectral distrib., intensity distrib., polarization 4=13080
Cr(III) complexes in rigid glass, meas. 4=22920
$Cr-Al_2O_3.Ga_2O_3$, rel. to structure and deformations 3=20512
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CsBr(Tl) decay for different ionization density particles 1=9009
CsBr:Tl, proton and α-ray excitation 2=2257
CsBr:Tl, scintillation and particle type discrimination 3=24551
CsF 1=2455
CsI 0=16081
CsI 2=2249
CsI, α-pulses, decay time, intensity 2=18878
CsI, crystals grown from melt 0=13705

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CsI, scintillation calibration 0=3908
CsI, Tl activated, scintillation pulses, temp. dependence 1=17918
CsI, u.v. gamma- and photoluminescence 2=23589
CsI, CsI: Tl, decay time meas. rel. to light and α-particle excitation 4=7177
CsI—Tl, α^-, γ-excited, yield 0=1760
CsI:Tl, α-particle scintillation 2=725
CsI:Tl, α-pulses, decay time, intensity 2=18878
CsI(Tl) decay for different ionization density particles 1=9009
CsI:Tl, decay time, ion excitation 0=1756
CsI:Tl, decay time meas. 3=10005
CsI:Tl, delayed light emission 0=4429
CsI:Tl detector, charged particle discrimination 2=3210
CsI:Tl, electron and α-scintillations 0=16103
CsI:Tl, excitation in absorption bands 0=11771
CsI:Tl, fluorescence due to C^{12}, N^{14}, O^{16} ion bombard. 0=664
CsI:Tl, form of pulses 2=8586
CsI:Tl, γ-scintillation 0=4459
CsI:Tl, heavy-ion response, energy depend. 1=8404
CsI : Tl, intracentre luminescence 3=945
CsI;Tl, neutron excitation, 14.6 MeV 3=12689
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CsI:Tl, proton and α-ray excitation 2=2257
CsI(Tl), scintillation decay-time 2=6599
CsI:Tl, scintillation, effect of electron field 2=4188
CsI : Tl, scintillation process 3=20506-7
CsI:Tl, scintillation pros., temp. depend. 2=7789
CsI:Tl, u.v. excited, decay 1=9010
CsI:Tl, u.v. and γ-ray excitation, spectra 2=4171
CsI : Tl, X-ray and γ-ray fluorescence 3=13215
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Cu halides, spectra at 77°K 0=16049
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CuCl, edge luminescence, excitation curves, 77°K 4=1768
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Cu_2O, effect of elec. field at surface 2=4172, 8572, 18859, 23592
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Cu_2O, elec. field effects 3=22942
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Cu_2O, excitation spectrum rel. to absorpt. spectrum 2=14718
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Cu_2O, yellow exciton spectra, rel. to neutron-irradiation 3=17998
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$DyCl_3$, i.r. fluorescence 2=6577
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$ErCl_3$ 1=12493
$ErCl_3$ 2=14678
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Er^{3+} in Y$_2$O$_3$ single crystals, fluorescence spectrum 4=22856
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Eu^{2+} in alkali halide cyrstals, absorpt. and fluorescence spectra 4=15611
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GaAs, electron beam prod., 100°K 4=26245
GaAs, by electron bombardment 4=4298
GaAs grown in oxygen 4=4296
GaAs, homog.-doped bulk samples 4=4297
GaAs, n and p-type, fluorescence meas. 4=10175
GaAs, p—n junction, radiative recombination through impurity levels 4=4299
GaAs p—n junctions, recombination radiation 4=28643
GaN, doped 1=3861
GaN, prep. and cathodeluminescence 2=8589
GaN, pure and doped 0=1751
β—Ga$_2$O$_3$, temperature and concentration dependence 3=15707
Ga$_2$O$_3$: Cr, relaxation times, various Cr$_2$O$_3$ concs., reabsorpt. 3=20509
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GaP, decay time fine structure rel. to lattice defects 4=4300
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GaP, electroluminescence, 20°-100°C, and effect of Zn impurities 1=10122
GaP, low temps., regular lines due to excitons 4=13075
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GaP, p—n junction, rel. to temp. and excitation density 1=17775
GaP, p—n junctions, forward-biased 2=23436
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GaP, photoluminescence, complex fine-struct. at 4.2°K 2=21265
GaP, recombination emission 0=20916
GaP, spectrum, 4·2°K 3=8618
GaP:Zn, p—n and photoluminescence 1=14631
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Ga$_2$S$_3$, meas. rel. to carrier trapping states 4=7185
Ga$_2$S$_3$—Ga$_2$Se$_3$, self-activ., rel. to chem. structure 4=7178
Ga$_2$S$_3$—In$_2$S$_3$, self-activ., rel. to chem. structure 4=7178
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GdCl$_3$ 3=10988
GdCl$_3$, Gd^{+++} intensity and duration 0=10674
GdCl$_3$, photochemical damping 2=10616
GdCl$_3$.6H[D]$_2$O, fluorescent transitions, rel. to vibration of neighbouring molec. group 4=1773
GdCl$_3$. 6H$_2$O, resonance line self-reversal in thick crystals 4=26241
Gd$_2$O$_3$:Nd^{3+}, fluorescence spectra at room temp. and 77°K 4=17602
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Gd$_2$(SO$_4$)$_3$, Gd^{+++} intensity and duration 0=10673-4
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GeO$_2$, fluorescence 1=9005
GeO$_2$:Al, thermoluminescence 0=1769
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HgI$_2$, correlation between luminescent and absorption edges 1=17906
HgI$_2$, edge bands, long-wave excitation 4=13074
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  - HgS, black, i.r. meas. 2=18840
  - Ho in thoria 2=14733
  - Ho, trivalent, in scheelite structure 0=21002
  - Ho^{2+}, in MeF_2(Me = Ca, Sr, Ba) 4=13038
  - Ho^{3+} chelates, fluorescence spectrum 0=16084
  - Ho^{3+} doped 1% in fluorides, i. r. excited 4=28718
  - InP diodes, recombination radiation, photoinduced, 6° and 77°K 4=4301
  - In_2S_3, i.r. emission 3=20515
  - In_2S_3, meas. rel. to carrier trapping states 4=7185
  - InSb, recombination light rel. to pinch effect 4=17394
  - K halides, recombination 3=3034
  - K halides, recombination mechanism, with various activators 0=20996
  - KBr, activated by "Hg-like" ions, mechanism 2=6594
  - KBr, activation with homologous series of ions 0=16104
  - KBr, rel. to colour centres 2=711
  - KBr, fluorescence of O_2^- impurities 1=11363
  - KBr, with Hg-like activator 1=17909
  - KBr phosphors with activators, recombination spectra 4=15615
  - KBr, transient, F centre lifetime 2=6387
  - K Br, under X-ray irrad., at low temps. 4=28733
  - KBr, X-ray luminescence 1=20012
  - KBr, due to X-rays and elec. field together 2=8575
  - KBr:Ag, atomic centres 2=14728
  - KBr[Cl], excited F_A colour centres, lifetime 4=25974
  - KBr:In, effect of X-rays 0=10065
  - KBr:In, flash, heat treatment effect 4=1766
  - KBr:In, photo- and thermoluminescence 2=4167
  - KBr:In, recombination processes giving luminesc. 2=14711
  - KBr/KI single crystals 1=7721
  - KBr : Pb, absorption, emission, and excitation spectra 1=17890
  - KBr:Sn, grain boundary luminescence 1=9008
  - KBr:Tl, absorption spectra 2=2233
  - KBr:Tl, colour centre diffusion in K vapour 2=3956
  - KBr : Tl, emission spectra, at low temp. 3=4984
  - KBr : Tl, emission spectrum 1=17911
  - KBr:Tl, nature of centre 3=6536
  - KBr:Tl:In, phosphorescence, sensitized 0=10072
  - KCl, activated by "Hg-like" ions, mechanism 2=6594
  - KCl, activated, thermoluminescence, relaxation 1=11408
  - KCl, activation with homologous series of ions 0=16104
  - KCl, rel. to colour centres 2=711
  - KCl crystals, F' centres, in i. r. 4=22921
  - KCl, excitation spectra 4=7186
  - KCl, F-centre fluoresc. 2=10535
  - KCl, F-centres, lifetime 4=17450
  - KCl, F and F' centres, concentration dependence 4=4303
  - KCl, F and M centres 0=20937
  - KCl, fluorescence of O_2^- impurities 1=11363
  - KCl, Harshaw, gamma ray effect vars. in different samples 4=1525
  - KCl, heat pretreated coloured crystals, symmetry of green phosphorescence 0=13720
  - KCl, with Hg-like activator 1=17909
  - KCl, monocrystalline (0° to 200°C) 0=4467
  - KCl, optical excitation of I atoms 3=15709
  - KCl, plastically deformed, thermal glow 3=969
  - KCl, polyactivated 2=23601
  - KCl, thermal glow, rel. to plastic deformation 3=23104
  - KCl, thermoluminescence, activation energy 0=4466
  - KCl, transient, F-centre lifetime 2=6387
  - KCl, under X-ray irrad., at low temps. 4=28733
  - KCl, X-ray irrad., M-centre mechanism 1=14633
  - KCl, X-ray luminescence 1=20012
  - KCl and KCl:Tl, X-irrad. glow peak, quenched-in cation–anion vacancy pairs explanation 4=25986
  - KCl:Ag, luminesc. centres at struct. defects 2=10384
  - KCl:Ag, Pb, fluorescence decay curves 3=23103
  - KCl:Ba, thermoluminescence 0=8016
  - KCl:Co^{2+} and :Ni^{2+}, centres 3=10923
  - KCl:KBr(Tl), isostructure effects 2=14722
  - KCl : Pb, absorption, emission, and excitation spectra 1=17890
  - KCl: Pb, intracentre kinetics, meas. and theory 4=28734
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  - KCl:Sr, thermoluminescence 0=8016
  - KCl:Tl, activator interaction with local vibrations 1=14627
  - KCl:Tl crystal, optical props. of centre 2=608
  - KCl:Tl, emission band complex nature, absorpt. splitting, perturbation theory 2=14724
  - KCl : Tl, emission spectra, at low temp. 3=4984
  - KCl:Tl, excitation spectra 4=7186
  - KCl:Tl, excitation spectra, rel. to Tl conc. and temp. 0=13709
  - KCl:Tl, due to far u.v., new excitation band 1=1181
  - KCl:Tl, long-period afterglow 0=21012
  - KCl:Tl, luminescence processes in multidimen. config. space 0=21005
  - KCl:Tl, mechanism of F-centre formation 2=16848
  - KCl:Tl, mechanism of scintillation phenomena 0=18147
  - KCl:Tl phosphorescence, fundamental band region 1=12494
  - KCl:Tl, pressure-effect model for luminescent centre 3=10992
  - KCl:Tl, pressure effects, rel. to configuration coordinate model 0=657
  - KCl:Tl, pressure shift of 3050 A emission band 2=21267
  - KCl:Tl, quantum--mech. calc. of a luminescent centre 0=4448
  - KCl:Tl, spectra, decay, thermoluminescence 0=8016
  - KCl : Tl, spectral bands, vibr. calc. 4=13065
  - KCl:Tl, temp. dependence 1=20007
  - KCl:Tl, theory 0=16086
  - KCl : Tl, X-irrad., phosphoresc. decay 4=13082
  - KCl:Tl and KCl:Pb, rel. to impurities 3=18022
  - KF:U, line spectra, 77°K 1=2455
  - KI, activated by "Hg-like" ions, mechanism 2=6594
  - KI, activation with homologous series of ions 0=16104
  - KI, rel. to colour centres 2=711
  - KI, γ-irradiated, decay constants 1=10116
  - KI, with Hg-like activator 1=17909
  - KI, low activator concs. 2=14723
  - KI, in mixed crystals, with KBr and TlI, exciton mechanism 1=1175
  - KI, solns., effect of relax. due to u.s. 2=11370
  - KI, transient, F-centre lifetime 2=6387
  - KI, trapped charge, low temp. 0=2957
  - KI, u.v. gamma - and photo-luminescence 2=23589
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  - KI, X-ray luminescence 1=20012
  - KI and KI:Tl, thermoluminescence and phosphorescence 0=6208
  - KI:In, excitation in absorption bands 0=11771
  - KI : In, intracentre luminescence 3=945
  - KI:Sn^{++} and Pb^{++}, exciton excitation 2=14710
  - KI:Tl 2=4171
  - KI:Tl, α, γ, p decay times 2=20193
  - KI:Tl, decay time meas. 3=10005
  - KI : Tl, emission spectra, at low temp. 3=4984
  - KI:Tl, excitation in absorption bands 0=11771
  - KI:Tl, exciton-induced 1=10120
  - KI:Tl, exciton induced, interpretation 1=11404
  - KI:Tl, quantum yield under far-u.v. excitation 0=21004
  - KI:Tl, spectra 0=20997
  - KI:Tl, rel. to Tl content and irradiation temp. 1=20006
  - KI : Tl, by X-rays, wavelength depend. 3=4982
  - $KMgF_3$:Mn, cathodoluminescence 2=8587
  - KMg(Ni)F_3, coincidence with absorption 3=19993
  - $KMnF_3$ temp. var., large 3=23102
  - KNO_3, γ-irradiated 4=10217
  - Kr, solid, spectrum, predicted 0=13699
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  - $LaAlO_3$: Cr, Nd, rel. to $Cr^{3+}3d \rightarrow Nd^{3+}4f$ transfer 4=30539
  - $LaBr_3$, Pr^{3+} fluoresc. spectra 2=10595
  - $LaCl_3$: Ho^{3+}, fluorescence, 2600 to 12 000A 4=30685
  - $LaCl_3$:Pr, two-photon excitation 2=4175
  - LaF_3:Er^{3+}, 3500-10 000 A 3=25457
  - LaF_3:Pr 3=23072
  - La_2O_3, cathodoluminescence, activated by rare earths 3=13214
  - Li Al silicate, Ce activated, γ- and n-response 1=1983
  - LiCl, aq. soln., Sn^{4+} recomb. at low temps. 2=21912
  - LiCl, thermoluminescence and phosphorescence 0=6208

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- **solids, inorganic**—contd
  - LiF, activated by uranyl nitrate 2=18861
  - LiF, centres induced by X-irradiation 1=20051
  - LiF, colour centres, irradiated 3=6540
  - LiF crystals, deformed, band splitting in spectrum 2=712
  - LiF crystals, X- and α-irradiated 4=26206
  - LiF films, "saturation", rel. to He ion and electron penetration depth 4=8855
  - LiF, fluorescence, rel. to growth and irrad. 4=4302
  - LiF, piezospectroscopic splitting at 5698A 2=16847
  - LiF, thermoluminescence spectra 0=8028
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  - LiF, X-irrad., rel. to absorpt. spectrum at 20K 4=28695
  - LiF: Co, X-irrad. and non-irrad. 3=8598
  - LiF, U- activated, visible and u.v., –196°C 2=14732
  - LiF:U, centres, props. and nature 3=8619
  - LiF–U, combined magneto-electric dipole transitions 3=20516
  - LiF:U, 450-600 mμ, U conc. depend. 1=14632
  - LiF:U, line spectra, 77°K 1=2455
  - LiF:U, luminescence centres, orientation 0=10060
  - LiF:U, nature of elementary oscillations of U ion 0=18137
  - LiF: U^{6+}, elec. and mag. series 4=28731
  - LiF_2, U-activated, "relaxation spectra" 3=3035
  - LiH, impurities forming emission centres 0=10061
  - LiI, beta ray and slow neutron excited 4=13079
  - LiI, γ and neutron sensitivity 2=20360
  - LiI(Eu) decay for different ionization density particles 1=9009
  - Li^6I : Eu scintillator, neutron response, temp. depend. 4=9225
  - Li–Mg–SO_3, glass, Gd^{3+}-activated, u. v. stimulated radiation 3=3042
  - $2Li_2O$. MgO. WO_3:U 2=2250
  - $2Li_2O$. WO_3:U, preparation and properties 1=2456
  - M^{2+} niobates and tantalates, photoluminescence, self-activated 4=26244
  - Mg aluminate spinel, Mn^{2+}- and Fe^{3+}- activated, cathodoluminescence 4=17603
  - Mg borate phosphors, Ag-activated 0=4445
  - Mg fluorogermanate and fluoroarsenate, temp. depend. of fluorescence 1=6224
  - Mg fluorogermanate, Mn^{4+} activator centre 0=16087
  - Mg fluorogermanate, photoluminescence 1=9006
  - Mg foils, due to electron irrad. 2=14752
  - Mg germanate, Mn-activated 1=6222
  - Mg metaphosphate glasses, Cu and Mn activated 2=18862
  - Mg tungstate, quantum efficiency determination 0=19393
  - Mg Al borate, Ce activated, γ- and n-response 1=1983
  - $(Mg, Ba)_2$ P_2O_7:Sn, prep. and luminesc. 2=8577
  - $(Mg_{1.5}Ba_{0.5-x}Sr_x)P_2O_7$:Sn, prep. and luminesc. 2=8577
  - $MgCO_3$, phosphorescence decay law 1=7724
  - MgF_2, evaporated films 2=719
  - MgF_2:U, line spectra, 77°K 1=2455
  - MgLi antimonate, Mn-activated, u.v. -excited 0=10062
  - Mg–Li, Mg–Li–Na, Mg–Li–K, antimonates, Mn activated 4=1774
  - $Mg_5Li_6Sb_2O_{13}$, prep. and props. of phosphors 2=4174
  - $MgLi_2WO_5$, activated with Mn 2=8576
  - MgO, e.s.r. correl. with Fe and Cr umpurity valence changes 0=11795
  - MgO, electron excitation 3=15717
  - MgO, excited by surface recomb. of N atoms 2=18854
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  - MgO, vacuum u.v., cathodoluminescence 3=13178
  - MgO:Cr, spectra of exchange-coupled Cr^{3+} pairs 0=660
  - MgO:Cr, strain effects on degenerate line at 14319 cm^{-1} 1=9007
  - MgO:Cr^{3+}, Zeeman effect of red emission line 1=1180
  - MgO: Cr^{3+} and : V^{2+}, ${}^2E \rightarrow {}^4A_2$ fluoresc. lines 4=10216
  - MgO-GeO_2-SiO_2-TiO_2 system, subsolidus equilibria and luminescence data 4=1775
  - MgO:V^{2+}, strain-induced splitting 3=23108
  - $MgWO_4$, decay time ion excitation 0=1756
  - $MgWO_4$, field-stimulated emission, absence below 2 x 10^5 V/cm 2=12629
  - Mn-activated crystal phosphors, Mn valence 1=12502
  - Mn-activated phosphors, correlation of e.s.r. with luminescence 4=26411

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- **solids, inorganic**—contd
  - Mn activated phosphors, decay of cathodoluminescence 3=3066
  - Mn-activated phosphors, pphys. props. 0=1752
  - Mn chloride complexes with amines 2=12620
  - Mn^{4+} sharp line fluorescence in α-Al_2O_3 4=26236
  - MnF_2, temp. var., large 3=23102
  - MnO, visible radiation emitted by electron bombard., spectral distrib., intensity distrib., polarization 4=13080
  - N, films deposited at low temp. 0=6200
  - N, solid, effect of dilution with A 0=6195
  - N, solid (4. 2°K), containing atoms or free radicals 0=13711
  - N, solid, phosphorescence 0=4456
  - NH_4 halide phosphors 3=23100
  - NH_4 halide phosphors, Tl^+, Sn^{2+} activated 3=946
  - NH_4Br:Tl, u.v. excited, decay 2=23598
  - NaBr, thallium activated, thermoluminescence and phosphorescence 0=6208
  - NaBr:In, flash, heat treatment effects 4=1766
  - NaBr:In, recomb. processes giving luminesc. 2=14711
  - NaCl, activated by Cd and Co 3=4985
  - NaCl, activated by "Hg-like" ions, mechanisms 2=6594
  - NaCl, activation with homologous series of ions 0=16104
  - NaCl, rel. to colour centres 2=711
  - NaCl, coloured, thermoluminescence 0=18072
  - NaCl, coloured, u.v. and X-ray luminescence 3=813
  - NaCl, fluorescence of O_2^- impurities 1=11363
  - NaCl, with Hg-like activator 1=17909
  - NaCl, NaCl:Tl, thermoluminescence and phosphorescence 0=6208
  - NaCl, polyactivated 2=23601
  - NaCl, recombination 3=3034
  - NaCl, shocked, due to heating 4=22923
  - NaCl, thermoluminescence, activation energy 0=4466
  - NaCl, thermoluminescence, effect of illumination at liq. N temp. 0=18155
  - NaCl whiskers 3=20518
  - NaCl, X-ray coloured, thermoluminescence 0=2971
  - NaCl, under X-ray irrad., at low temps. 4=28733
  - NaCl, X-ray luminescence 1=20012
  - NaCl, X-ray stimulated, imperfections mechanism 2=6606
  - NaCl:Ag, atomic centres 2=14728
  - NaCl, Ag, decay time, ion excitation 0=1756
  - NaCl:Ag, luminesc. centres at structural defects 2=10384
  - NaCl–Ag phosphor, recombination luminescence mechanism 4=7188
  - NaCl: Ag, theory 0=16086
  - NaCl:Co, X-ray luminesc. 2=6607
  - NaCl:Co^{2+} and :Ni^{2+}, centres 3=10923
  - NaCl:Cu, meas. 3=18008
  - NaCl:Cu, photo- and thermoluminescence 2=4167
  - NaCl:Fe, X-ray luminescence 1=20011
  - NaCl, Fe, Co, Ni added, X-ray irrad. 2=18863
  - NaCl:Ni, decay mechanism 2=714
  - NaCl:Ni, optical flash decay mechanism 2=14709
  - NaCl:Ni, X-ray light sums 2=2251
  - NaCl : Ni, Ca, rel. to dislocations 3=20517
  - NaCl:Pb, nature of critical nucleus 4=7197
  - NaCl: Sm^{3+}, orange-red region 4=28736
  - NaCl:Tl, and NaCl:Ag, rel. to impurities 3=18022
  - NaCl:TlCl, afterglow, rel. to method of preparation 9=8019
  - Na europium tungstate, fluoresc., rel. to rare-earth ion subst. 2=10629
  - NaF, thermoluminescence and phosphorescence 0=6208
  - NaF, U-activated, visible, and u.v., –196°C 2=14732
  - NaF–U, combined magneto-electric dipole transitions 3=20516
  - NaF:U, line spectra, 77°K 1=2455
  - NaF: U^{6+}, elec. and mag. series 4=28731
  - NaF_2, U-activated, "relaxation spectra" 3=3035
  - NaI crystals, exposed to γ-rays, photofractions 2=3212
  - NaI, thermoluminescence and phosphorescence 0=6208
  - NaI, 22 samples, fluorescence spectra, 20 to –190°C 0=21006
  - NaI:Sn^{++} and NaI:Pb^{++}, exciton excitation 2=14710
  - NaI:Tl 2=4171
  - NaI(Tl), activator distrib. 1=17522
  - NaI:Tl, conversion coeff. of Tl^{203} 2=3202

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- **solids, inorganic**—contd
  - NaI:Tl crystals, mounting, improved resolving power 3=528
  - NaI(Tl) decay for different ionization density particles 1=9009
  - NaI:Tl, decay time meas. 3=10005
  - NaI:Tl, delayed light emission 0=4429
  - NaI:Tl, δ-rays in efficiency determ. 2=17990
  - NaI : Tl, excitation spectra 3=20520
  - NaI:Tl, γ-ray absorption mechanism 0=9326
  - NaI:Tl, γ-ray response 2=5519
  - NaI:Tl, γ-ray scintillation counters 2=5521
  - NaI:Tl, γ-spectral props., temp. depend. 2=8579
  - NaI:Tl, γ-scintillator, resolution 2=5520
  - NaI:Tl, mechanism of scintillation phenomena 0=18147
  - NaI:Tl, melt grown, Tl distrib., scintillator applic. 1=11542
  - NaI:Tl, non-proportional response for γ-rays 2=9815
  - NaI:Tl (0-270°C) 0=13712
  - NaI:Tl, photopeak efficiency, response function, to 11 MeV 3=6670
  - NaI:Tl, rel. to plastic phosphors for 3-20 MeV γ-ray detection 2=5518
  - NaI:Tl, response function to γ-rays 3=3045
  - NaI:Tl, quantum yield, Tl conc. and temp. depend. 4=15616
  - NaI:Tl, response to energetic heavy ions 0=11788
  - NaI:Tl, response, non proportional, to diffracted X-rays 2=12621
  - NaI:Tl, response spectra, comparison with CsI 0=16102
  - NaI:Tl, scintillation props., temp. depend. 2=7789
  - NaI:Tl, scintillator, energy resolution, activator distrib. depend. 2=8588
  - NaI:Tl, scintillators, γ-ray sreponse 0=7244
  - NaI:Tl, spectra 0=20997
  - NaI:Tl, Tl dimer role 4=20488
  - NaI:Tl, u.v. excited, decay 1=9010
  - NaI : Tl, X-ray and γ-ray fluorescence 3=13215
  - NaI : Tl, X-ray excitation 3=20519
  - NaI:Tl, X-ray excitation, temp. and Tl conc. depend. 3=23107
  - $Na_{0.5}La_{0.5}WO_4$ doped with Tb^{3+} 3=25176
  - $NaNO_2$:Tl, simple crystals, polarization at low temp. 2=715
  - Nb cpds. with N, Si, H, L-series 2=14695
  - Nb in NbC, NbB_2, NbN, L^- spectra 2=14694
  - Nd-doped, YAl, YGa and YGd garnets 4=19309
  - Nd in SrF_2, 77°K 3=20482
  - Nd^{3+} in glass, environmental effects 4=20485
  - Nd^{3+} ion in $NdCl_3$ 1=8984
  - Nd^{3+} in oxide glasses 4=20484
  - Nd^{3+} in silicate glass, transfer from optical excitation of Ce^{3+} 4=28721
  - Nd^{3+} in Ba glass and $CaWO_4$, electron beam prod., 100°K 4=26245
  - Nd^{3+} in CaF_2, spectrum, var. conc. 4=15613
  - $NdCl_3$ diluted with $LaCl_3$ 1=10101
  - $NdCl_3$, spectrum analysis 0=8015
  - Nd^{3+}:$LaBr_3$, blue fluorescence, excited by ruby laser 4=20483
  - Nd^{3+}:$LaCl_3$, blue fluorescence, excited by ruby laser 4=20483
  - Ni-Fe, thin films investigation, X-ray fluores. 2=7162
  - NiO, visible radiation emitted by electron bombard., spectral distrib., intensity distrib., polarization 4=13080
  - O_2^- in alkali halides at low temp. 4=17605
  - PbI_2, excitation spectrum, rel. to absorption 3=6669
  - PbI_2 films 1=17892
  - PbI_2 monocrystals at 4°K 1=1160
  - $PbMoO_4$ 3=20479
  - PbS, i.r. recomb. emission, correl. with photocond. 2=8440
  - PbS photoluminescence rel. to oxygen adsorption 2=21266
  - $Pb_2TiP_2O_9$ 3=10982
  - $Pb_2ZrAs_2O_9$ 3=10982
  - $Pb_2ZrP_2O_9$ 3=10982
  - $Pm^{147}Cl_3$, in $LaCl_3$, spectrum 0=11787
  - Pr in thoria 2=14733
  - Pr^{3+} in $LaBr_3$ 3=3014
  - $PrCl_3$ at 4.2°K, ion pair resonance theory 2=6603
  - $PrCl_3$: Nd^{3+}, 5-6μ, 4·2°K 4=28732
  - $PrCl_3$ (Nd^{3+}), unusual i.r. fluorescence 4=4304
  - Ra, L X-ray fluorescence yield meas. 4=15307

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- **solids, inorganic**—contd
  - RbI:Tl, excitation in absorption bands 0=11771
  - RbI:Tl, scintillation and particle type discrimination 3=24551
  - Si grown junction, i.r. emission 1=1094
  - Si, recombination radiation in high elec. fields 1=2410
  - SiC, cubic, N-exciton complexes, phonon energy deriv. 4=10218
  - SiC, 15R, rel. to N-exciton complexes 4=7157
  - α-SiC, 5450-6700 A 3=25485
  - SiC, p-n junctions 0=15960
  - SiC, polarized edge emission 0=8012-13
  - SiC, semicond., p-n forward bias 3=13082
  - SiC, 6H, nitrogen-exciton complexes 3=18034
  - SiC (6H), photoluminescence spectrum 2=23123
  - SiC, spectra, temp. depend. 3=20485
  - Sm in thoria 2=14733
  - Sm^{2+} in alkali halide crystals 3=23079
  - Sm^{2+} in alkali-halide single crystals, 4.2°K 4=22887
  - Sm^{2+} ions in alkaline earth fluoride crystals 2=21242
  - Sm^{2+} in $LaCl_3$ 2=4176
  - $SmCl_3$ 3=3016
  - Sn and Mn activators, valence 2=14727
  - Sr magnesium phosphate: Sn brightness and stability 2=14713
  - Sr meta-antimonate, rel. to impurities 2=8558
  - Sr-B phosphors, oxygen-dominating 3=10993
  - $SrCl_2$: Sm^{2+}, spectra and selection rules 3=13204
  - SrF_2 1=2455
  - SrF_2 doped with 1% Dy^{3+}, fluorescence excitation by two-photon absorpt. 4=17599
  - SrF_2 doped with Sm^{2+}, fluorescence spectrum 4=17582
  - SrF_2, Eu^{2+}, Sm^{3+} impurities, electron phototransfer 3=951
  - SrF_2 : Nd, 77°K 3=20482
  - SrF_2:Sm^{2+}, 4f → 4f, selection rules 3=13204
  - SrF_2 : Sm^{2+}, kinetics and theory 3=4986
  - SrF_2:Sm^{2+}, spectra anal. 2=14717
  - SrF_2:Sm^{2+}, Zeeman effect 3=18026
  - SrF_2, U-activated, "relaxation spectra" 3=3035
  - SrF_2:U, spectra at −150°C and room temp. 0=10066
  - $SrLiPO_4$:Cu 2=8578
  - $SrMoO_4$ doped with Tb^{3+} 3=25176
  - $SrMoO_4$:Nd, rel. to optical maser activity 2=8509
  - SrO:$3B_2O_3$, Cu and Pb activated, 5500, 6100A bands 2=12623
  - SrO-CeO_2 3=6672
  - SrO: CeO_2, rel. to Ce valancy 4=28737
  - $Sr_3(PO_4)_2$, Cu-activated 0=4441
  - $Sr(PO_3)_2$:Eu, cathodoluminescence 2=23617
  - α-$Sr_2P_2O_7$:Eu, cathodoluminescence 2=23617
  - $Sr_2(PO_4)_2$:Eu, cathodoluminescence 2=23617
  - $Sr_2P_2O_7$:Sn 0=2955
  - $Sr_3(PO_4)_2$:Sn systems 2=4177
  - SrS, effect of flux on activator 2=6608
  - SrS, rare-earth activated, electron paramag. reson. investigation 2=14730
  - SrS, Mn activator incorporation 3=12965
  - SrS_2, Ni-activated 2=4170
  - SrS: Eu phosphors, e.s.r. study 1=3858
  - SrS:Eu:Sm, detection of optical excitation by e.s.r. of Eu^{2+} 0=682
  - SrS: Eu: Sm, e.s.r. study of activator-valence change on excitation 1=3857
  - SrS:Eu:Sm, ionization of Eu^{++} to Eu^{+++} 0=13713
  - SrS:Eu:Sm, light-sums, light and γ-excited 0=10074-5
  - $SrSb_2O_6$, Mn activated, effect of cation union replacements 2=14729
  - $SrTiO_3$, rare earth ions 2=14353
  - $Sr_2ZrAs_2O_9$ 3=10982
  - $Sr_2ZrP_2O_9$ 3=10982
  - Tb hexa-antipyrine tri-iodide 0=4452
  - Tb hexa-antipyrene tri-iodide, fluorescent lifetime of Tb 3=13205
  - Tb in thoria 2=14733
  - Tb, trivalent, in complex cpds. 0=6196
  - Tb^{3+}, in $KLaW_2O_5$ crystals 2=23602
  - Tb^{3+}, in tungstates and molybdates 3=10987
  - $0{\cdot}9TbCl_3 . 0{\cdot}1XCl_3 . 6H_2O$, X=rare earth ion 3=8620
  - $TbCl_3$, solvated with H_2O and D_2O, decay times 4=30698
  - $TbCl_3$, Tb^{+++} intensity and duration 0=10674
  - Tb and Eu salts, lifetimes 2=8580

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    $(Tb_{(1-x)}\,Eu_x)_2\,(WO_4)_3$, transfer of excitation energy from Tb to Eu 4=10219
    $Tb_2(SO_4)_3$, Tb^{+++} intensity and duration 0=10673-4
    Th, L X-ray fluorescence yield meas. 4=15307
    Th phosphate phosphors, Cu-activated, effect of Cu concentration 4=26248
    $Th_3(PO_4)_4$ phosphors 3=20523
    Tl^+ ion activated crystal phosphors 2=8561
    $TlBr-NH_4Br$ system, spectra between 120° and 165°C 0=13714
    TlCl 4=22924
    TlCl, build up, in absorpt. and exciton bands 4=10220
    TlCl, excitation, emission and absorpt. spectra 4=17609
    TlCl, single crystals 3=20799
    TlCl, rel. to structural defects, plastic deformation and dislocations 3=952
    TlCl-KCl mixture, rel. to comp. and phase struct. 2=6612
    Tm in thoria 2=14733
    Tm^{3+} in $CaWO_4$ and $SrWO_4$ 1=3854
    U, L X-ray fluorescence yield meas. 4=15307
    U-glass, phosphorescence decay rate spectra 0=18145
    U in NaF beads, photoelec. photometer 2=17107
    UO_2 ions, rel. to adsorbed surface 2=14738
    $UO_2(NO_3)_2$, hexahydrate and deuterate, and pyro-electricity 0=18138
    UO_2SiO_3, electron excited, —185 to 300°C 0=1753
    W, u.v. 2000-3400 A, on H ion impact 4=20487
    Xe, solid, α-particle scintillation 2=725
    Xe, solid, spectrum, predicted 0=13699
    YAl garnet, Pr doped 3=23072
    YAl garnet : Yb^{3+}, rel. to Yb^{3+} energy levels 4=1354
    YGa garnet : Yb^{3+}, rel. to Yb^{3+} energy levels 4=1354
    YGa garnets, rare-earth activated, visible emission at 77°K 1=5055
    Y_2O_3: Eu, luminescent behaviour at high temps. 4=10221
    $Y_2O_3:Eu^{3+}$, fluorescence and energy transfer 4=20489
    $Y_2O_3:Eu^{3+}$, lifetime and efficiency 4=7181
    Y_2O_3: Nd^{3+}. fluorescence. 77° and 300°K 4=10199
    Zn borate, anhydrous, rel. to As, Sb, Bi impurities 2=6619
    (Zn,Cd)S phosphors, emission spectra, influence of activators 4=1781
    Zn cpds., shock excitation, emission band 2=696
    Zn monocrystals, rel. to growing method 2=811
    Zn rhodamide, Pb activated, excitation, absorption and luminescence spectra 4=28739
    Zn silicate phosphors, in fluorescent lamp, surface chemical props. 0=11779
    $ZnBeSiO_4$, field-stimulated emission, absence below 2×10^5 V/cm 2=12629
    Zn—Cd sulphide, 0.75-1.2μ, 4.2-77.4°K 4=1780
    (Zn—Cd)S, chemical nature of activators 3=3051
    (Zn,Cd)S, coactivator emission 3=10998
    ZnCdS, colour temp. depend. 0=1062
    ZnCdS, emission shift rel. to activator 2=6614
    ZnCdS, rel. to energy level scheme 2=10626
    ZnCdS, i.r. quenching 2=8555
    (ZnCd)S, rel. to transistor junction temp. meas. 2=646
    (Zn:Cd)S: Ag, 75:25, for temp. meas. 3=8622
    (Zn, Cd)S : Cu, crystal structure, atomic, X, γ-ray effects 3=23457
    Zn—CdS, Mn activated, α scintillation, magnification by elec. fields, temp. var. 4=30699
    ZnCdS- Mn, enhancement by electric field, u.v. excitation 3=6673
    ZnCdS:Mn, prior sensitization 3=10994
    ZnCdS:Mn, by X-rays a.c. components prod, by 10^4V/cm at 400 c/s 3=15710
    (Zn:Cd)S mixed crystal phosphors, emission band displacement 2=4180
    ZnCdS, photodielec. props., powder layers 0=6158
    ZnCdS, super linear yield 2=6624
    ZnCdS, trapping centre conc. determ. 2=23607
    (Zn, Cd)S, by X-rays, elec. field and i.r. effects 2=14736
    ZnCdS:Ag, effect of high pressure 2=21271
    ZnCdS:Ag, efficiency 0=16091
    ZnCdS:Ag, efficiency for X-ray screen 2=14735
    ZnCdS:Ag, flashing effect in elec. field 2=12628
    ZnCdS:Ag, forbidden gap and ground-state energy, rel. to CdS conc. 0=2959

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    Zn-CdS:Ag, peaks rel. to electron traps 2=12629
    (Zn, Cd)S:Ag, sedimentation investigation 2=8566
    ZnCdS:Au 0=16096
    ZnCdS:Cu, spectra, comp. with Bunsen-burner flame 0=10052
    ZnCdS:Cu and :Ag, rel. to composition 2=6615
    ZnCdS:Mn, elec. field enhancement 2=12626
    ZnCdS:Mn, enhancement by elec. fields, electrons and X-rays 2=728
    ZnCdS:Mn, intensification by electric fields 1=20015
    ZnCdS:Mn:Au:Cl, field enhancement, variation with frequency 0=4457
    $ZnCl_2$, sulphide activated, prepn., props. 3=950
    ZnF_2:U, line spectra, 77°K 1=2455
    $ZnIn_2S_4$ and $ZnIn_2S_4$: Cu single crystals 4=28738
    ZnO, α-scintillations, low temp. depend. 0=10078
    ZnO, cathodoluminescence, polarization 3=957
    ZnO, double acceptor luminescence 3=15704
    ZnO, edge-emission theory 0=2956
    ZnO, "edge" and green emission rel. to elec. cond. 3=3048
    ZnO, edge luminescence 0=6202
    ZnO, effect of absorbed O 3=6679
    ZnO, effect of Cu activation 3=20524
    ZnO films, sublimed 3=16144
    ZnO, green rel. to electrical dark conductivity 1=11311
    ZnO, green emission quenching 2=16852
    ZnO phosphors, cathodoluminescence 1=1186
    ZnO, prep., decat time and cathodo-props. 2=16854
    ZnO, pure and Mn-activated, in red spectrum 0=10068
    ZnO, ruby-laser induced 4=26153
    ZnO, single crystals, polarized emission 0=11782-3
    ZnO, thermoluminescence and luminescence spectra rel. to α-ray bombardment 1=11409
    ZnO, due to u.v. and electrons, mechanism 3=3047
    ZnO, yellow, rel. to excess O and crystal form 2=16851
    ZnO, yellow luminesc. 2=6620
    $ZnO:B_2O_3$, different proportions, host crystals 2=2254
    $ZnO-CdO-P_2O_5$, Mn activated 4=30796
    ZnO:Cu, groups of traps 4=20490
    ZnO:Se, photo- and cathodoluminescence, effect of Cu, Fe, Ni impurities 0=21008
    ZnO:Zn, H_2^+ excited, decay times 0=1755
    ZnP_2, red and black forms 3=16072
    $Zn_3(PO_4)_2$, γ-phase 3=6849
    $ZnP_2O_7-Cd_2P_2O_7$, Mn activated 4=30796
    $Zn(PO_3)_2-Cd(PO_3)_2-Mg(PO_3)_2$ system, Mn activated 4=26573
    $Zn_3(PO_4)_2-Mg_3(PO_4)_2$:Mn 0=2953
    Zn sulphides, phosphorescence, decay law 0=13721
    ZnS 4=7167
    ZnS, A and B centres, e.s.r. study 2=23605
    ZnS, activated with Cu, fluoresc. emission bands 2=12624
    ZnS, activated, evaporated films 2=719
    ZnS, activated, i.r. stimulation and quenching 3=6677
    ZnS, activated, piezo-effect 2=10635
    ZnS, activation mechanism of mineralizing agents 2=6621
    ZnS, activator-free, luminesc. centres 2=4181
    ZnS, afterglow 0=10023
    ZnS, α-ray scintill., field quenching model 3=13208
    ZnS, anti-Stokes, rel. to 2-step optical excitation 2=23593
    ZnS, bombardment conductivity 0=18055
    ZnS, cathodoluminescence of layers on glass plates 1=3868
    ZnS, charged layers in d.c. fields 2=6644
    ZnS, chemical nature of activators 3=3051
    ZnS, coactivator emission 3=10998
    ZnS, rel. to crystal morphology 2=16859
    ZnS crystals, nature of transitions 4=28740
    ZnS, Cu or Ag-activated, mechanisms 4=28744
    ZnS, with Cu, Ag, Li and Ti 2=10624
    ZnS, Cu and Cl activated, growth 2=16987
    ZnS, deep trapping states 0=6197
    ZnS, rel. to defects 3=22705
    ZnS, diffusion of activators 0=655
    ZnS, double acceptor luminescence 3=15704
    ZnS, due to incorporation of Cu 3=3069
    ZnS, edge-emission theory 0=2956
    ZnS, effect of Al and Zn additions 4=1779
    ZnS, effect of growth conditions 3=6675

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  solids, inorganic—contd
    ZnS, effect of pressure 3=18035
    ZnS, effect of pulverization on opt. and elec. props. 0=10084
    ZnS, effect of synthesis conditions 3=25487
    ZnS, electrets, effect of electric fields ant temp. 0=16092
    ZnS, electric field effects on quenching and enhancement 4=15617
    ZnS, electronic structure of luminescent centres 1=1182
    ZnS electrophotoluminescence rel. to elec. fld., application 3=966
    ZnS, excitation spectra meas. 3=18037
    ZnS, excitation spectra, theory 3=18036
    ZnS excited by radiation intensity-modulated at 100 c/s 4=4307
    ZnS films, sublimed 3=16144
    ZnS, flash, three-trapping-levels model 3=3050
    ZnS, fluoresc. correl. with stoichiometry deviation 4=22926
    ZnS at 4.2°K, rel. to excitons 2=14672
    ZnS, by γ-rays, effect of elec. field 3=8629
    ZnS group, excitation by modulated light 3=20525-6
    ZnS, rel. to HCl proportions in vapour phase during growth 2=8788
    ZnS, i.r. effect, and anti-Stokes emission 3=2049
    ZnS, i.r. emission and electroluminescence, effect of Cu concn. 1=17919
    ZnS, i.r., meas. and model of centre 3=8621
    ZnS, i.r. quenching 2=8555
    ZnS, i.r. stimulation 0=11786
    ZnS, i.r. and u.v. excited, trapped electrons 0=18139
    ZnS, infrared quenching, temp. effect 0=16097
    ZnS, intensity decrease rel. to mechanical crushing 2=18868
    ZnS, interaction of Ag and Sm activators 3=3057
    ZnS, n irradiated, quenching by Cu or Co 3=18039
    ZnS, rel. to lattice defects and impurities, thesis 1=20014
    ZnS, luminescence centres, review paper 4=1526
    ZnS, Mn-activated, electro-cathodoluminescence rel. to temp. 2=23611
    ZnS, monocrystals, polarization of luminescence 0=16093
    ZnS, optical quenching, thermal activation energy 2=16855
    ZnS phosphors, ageing 1=14640
    ZnS phosphors, cathodolumin., elec. field effects 3=3065
    ZnS phosphors, cathodoluminescence induced by electron bombardment 1=14652
    ZnO phosphors doped with Li, Ni, Cu 3=23111
    ZnS phosphors, e.s.r. study 3=23112
    ZnS phosphors, electron trap depth, i.r. light 2=717
    ZnS phosphors, emission shifts, rel. to activators, lattice extension and compression 3=8625
    ZnS phosphors, escape of trapped electrons 3=20529
    ZnS phosphors, excitation energy storage, transfer 3=15699
    ZnS, phosphors, 14-77°K and shallow trapping levels 3=23132
    ZnS phosphors with impurities, spectroscopic analyses 3=941
    ZnS phosphors, influence of fluxes 2=23603-4
    ZnS phosphors, preparation, particle growth 1=1380
    ZnS phosphors prepared at room temp. 3=10997
    ZnS phosphors, reversible transformations 1=17914
    ZnS phosphors, steady-state 2=16858
    ZnS phosphors, steady-state 3=20527
    ZnS phosphors, u.v.-excited, i.r. effects 3=23110
    ZnS, photodielec. props., powder layers 0=6158
    ZnS, photoelectroluminesc., u.v. 3=3070
    ZnS, polarization rel. to colour centres 2=23591
    ZnS, polarized 1=10090
    ZnS, positive temp. coeff. under 60 keV electrons 4=13091
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See also Antiferrimagnetism.
(subheading introduced in 1961)
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$CaCO_3$, transition, rel. to specific heat, 1.6° to 70°K 3=17659
$Ca_3Fe_2Ge_3O_{12}$ garnet, antiferromagnetism 0=11893
$Cd_{0.8}Mn_{2.2}O_4$, < 200°K 4=26345
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Co^{++} ammine and anhydrate salts, susceptibility at low temp. 1=14765
$CoBr_2$, susceptibility 0=13845
$CoBr_26H_2O$, below 3°K, from proton resonance and heat capacity study 0=3099
$CoBr_2 \cdot 6H_2O$, space group, from p.m.r. 4=13262
$CoCO_3$, at low temps. 1=3919-20
$CoCO_3$, moment meas. 4=7298
$CoCO_3$, transition, rel. to specific heat, 1.6° to 70°K 3=17659
$CoCl_2$ 3=20626
$CoCl_2$, ordering in layer structure 3=20625
$CoCl_2$, ordering, thermal anomaly 2=6272
$CoCl_2$, spin waves, semicontinuum model 3=13286
$CoCl_2$, susceptibility 0=13845
$CoCl_2$, theory 0=13848

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$CoCl_2.H_2O$, effect on γ-rays emitted by Mn^{54} impurity 2=23687
$CoCl_2.6H_2O$, internal mag. fields, logarithmic relation 2=21292
$CoCl_2.6H_2O$, mag. field depend. of thermal cond. 2=23092
$CoCl_2.6H_2O$, nuclear orientation of Mn^{54} and Co^{60} 1=3585
$CoCl_2.6H_2O$, proton resonance 1=3951
$CoCl_2.6H_2O$, space group, from p. m. r. 4=13262
Co—Cu dilute alloys, antiferromag. term 3=5028
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CoF_2, ordering, effect on i.r. absorption 3=15673
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CoF_2, pressure depend., piezomag. moment 0=4500
CoF_2, spin-wave scatt. of phonons, analysis 4=28852
CoI_2, susceptibility 0=13845
$CoNH_4$–Tutton salt, below 1°K 0=13738
$Co(NH_4)_2(SO_4)_2.6H_2O$, nuclear orientation of Mn^{54} and Co^{60} 1=3585
$[Co_x, Ni_{1-x}] - [CoO_x, NiO_{1-x}]$, ferro—antiferromagnetic exchange interaction 1=6271
CoO 0=8070-1
CoO, critical scattering of neutrons 0=13806
CoO, domain struct. electron mic. obs. 4=17667
CoO, effect on elasticity, temp. var. 3=6774
CoO, magnetostriction 1=14758
CoO, magnetostriction 3=1016
CoO, 100-700°K 2=757
CoO, mag. susceptibility, magnetostriction 2=12717
CoO, superexchange and delocalization effects 0=13851
CoO, susceptibility 4=20577
Co_3O_4, anomalous interaction between A sites 4=13263
$CoRh_2O_4$ 3=23196
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$CoSO_4$, anhydrous, mag. structure 4=7297
$CoSO_4$, β, structure and crystal structure, 4.2°K 4=1852
β $CoSO_4$, mag. structure 3=8695
β-$CoSo_4$, magnetic structure and mag. moment 3=15731
$CoSO_4$, structure by neutron diffr. 2=6679
$CoTiO_3$ 4=13586
$CoUO_4$, structure at low temps. 3=3139
Cr, and alloys with transition metals, correl. with plasticity 4=23028
Cr, antiphase antiferromag. structure of single crystals, by neutron diffr. 0=1816
Cr, anisotropy 4=15659
Cr, ground-state, as spin density wave state 3=2772
Cr ions in ruby, exchange coupling, < 0.3°K 4=17666
Cr, mag. structure, study using de Haas-van Alphen effect 4=23027
Cr, magnetomech. damping, rel. to domain structure 1=20309
Cr, neutron diffr. exam. 3=23195
Cr, neutron diffr. study proposed to distinguish antiferromag. mechanism 0=11910
Cr, neutron diffraction study 3=1109
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Cr, transition at 40°C, correl. with spec. ht. anomaly 0=17893
Cr^{52}, paramag. neutron scatt. rel. to induced moments 2=21349
Cr_2As, rel. to temp. 1=12547
$CrBr_3$, low fields, transition to ferromag. at high fields, angle effects 4=10297
$CrBr_3$, neutron diffr. 2=18916
$CrBr_3$, 16.8-37.7°K, princ. magnetiz. 3=3140
$CrCl_3$, from n. m. r. of Cr^{53}, var. with temp., mag. field 4=13341
$CrCl_2$, neutron diffr. study 0=10184
$CrCl_3$, neutron diffraction investigation 1=20159
$CrCl_2$, ordering, entropy changes 3=1061
$CrCl_2$, ordering, thermal anomaly 2=6273
$CrCl_3$, 16.8-37.7°K, princ. magnetiz. 3=3140
$CrCl_3$, sublattice mag., low-temp., theory 3=25552
CrF_2, neutron diffr. study 0=10184
CrF_3, mag. moment, superexchange interaction 0=11902
$(Cr_{0.8}Mn_{0.2})Sb$ anisotropy 1=12549
(Cr Mn)Sb anisotropy 1=12549
CrN, mag. structure 0=3101
CrN, mag. structure, by neutron diffraction 0=6248
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Cr_2O_3, magnetoelec. effects 2=12665
Cr_2O_3, small particles 2=12794
Cr_2O_3, structure, neutron diffn. meas. 4=28822
Cr_2O_5, susceptibility 1=14759
Cr—Mn(15%), neutron diffr., superlattice peak 3=18110
Cr_2O_2, effect on elasticity, temp. var. 3=6774
Cr_2O_3, exchange interactions 2=6681
Cr_2O_3 fine grains, superantiferromagnetism 3=1093
Cr_2O_3 fine grains, suscept. rel. to diam., 20 to 400 A 3=1094
Cr_2O_3 fine particles 3=8697
Cr_2O_3, fine particles 20-400 A diam. 3=3137
Cr_2O_3 grains, anisotropy energies 3=15905
Cr_2O_3, magnetization by elec. field 1=20160
Cr_2O_3–Al_2O_3 mixtures, e.s.r. study 4=26350
Cr_2O_3—Fe_2O_3, mag. structure, neutron diffr. meas. 3=13267
CrPt, mag. spin distribution 3-15860
Cr—Re system, transition from supercond. 4=25853
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CrSb 0=10112
CrSb, anisotropy 1=12549
CrSe(1·00 to 1·07), susceptibility rel. to temp. 1=12512
Cr_3Se_4 mag. structure 3=3320
$CrVO_4$, struct. by neutron diffr. 2=6679
Cr_3X_4(X = S, Se, Te), crystal struct., atomic 4=13267
$CsMnF_3$, hexagonal, meas. 4=1851
$CsMnF_3$, structure, neutron diffn. meas. 4=28859
Cu^{++} ammine and anhydrate salts, susceptibility at low temp. 1=14765
Cu quinone complex salts, low temps. 3=11103
$CuBr_2$, mag. behaviour and susceptibility 4=20565
$CuCl_2$, mag. behaviour and susceptibility 4=20565
$CuCl_2$, ordering, entropy changes 3=1061
$CuCl_2$, ordering, thermal anomaly 2=6273
$CuCl_22H_2O$, anisotropic superexchange interaction 0=18205
$CuCl_2.2H_2O$, antiferromag. sublattice 1=20163
$CuCl_2.2H_2O$, specific heat in spin-wave region (0.2-0.55°K) 1=9978
$CuCl_22H_2O$, spin arrangement 0=11902
$CuF_2.2H_2O$, at 4.2°K 2=2390
$CuFeS_2$, magnetic structure 0=3101
$CuFeS_2$, torque curve and susceptibilities 1=11458
$CuCl_2.2H_2O$, mag. field depend. of thermal cond. 2=23092
$CuCl_2.2H_2O$, Cl n.m.r., 1.3-4.24°K 3=20680
$CuCl_2.2H_2O$, short-range order effect 3=18108
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$CuF_2.2H_2O$, short-range order effect 3=18108
$CuFeS_2$, mag. torque, powder susceptibility, Néel temp, direction 3=1027
$CuFeS_2$, spin waves, dispersion relation 4=13261
$Cu(HCO_2)_2.4H_2O$, 1.4°-80°K meas. 3=15780
Cu—Mn alloy, dilute, statistical model at low temps. 4=7299
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Cu—Mn alloys at Néel points 1=8879
Cu—Mn, mag. interaction between impurities 0=13847
Cu—(22·8%)Mn, magnetization and magnetocalorific effect 3=8694
Cu—Mn, polycryst., over certain range 1=20046
Cu—Mn, polycryst., over certain range 3=4997
Cu_2MnSb Heusler alloy 2=14812
$Cu(NH_3)_4SO_4.H_2O$, exchange-coupled linear chains 4=26351
$Cu(NO_3)_2$. $2.5H_2O$, 14° -20° and 0.4° -4.2° K 4=4393
CuO fine particles, susceptibility meas. 3=1095
CuO mag. structr., by neutron diffraction 3=126
CuO, mag. susceptibility 2=14811
CuO, rel. to stoichiometry 2=12756
$Cu_3(OH)_2(CO_3)_2$, azurite, order near Néel temp. 2=6711
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$CuSO_4.5H_2O$, 0.3-4.2°K 4=22948
Dy, ferromagnetic transform., at low temps., exchange interaction mechanism 3=20573
DyAl garnet, low temps., mag. induced transition to para 4=23029
DyAl garnet, transition 4=13264
$Dy_3Al_5O_{12}$, antiferromag. ordering 4=20566
$DyMn_2$, Laves-phase, various props. 3=15910
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    $ErFeO_3$, neutron diffr. study, 1.25-955°K 0=10187
    Eu, below 91°K, neutron diffr. exam. 4=13265
    Eu, evidence for antiferromag. ordering below 90°K, from elec. cond. 0=6080
    Eu, spin struct., neutron diffr. study 2=12667
    Fu, structure rel. to temp., neutron diffr. meas. 4=22983
    EuTe 3=11038
    EuTe, at high fields and low temps. 3=11050
    EuTe, at low temps. 3=1140
    EuTe, structure 4=15660
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    γ-Fe, f.c.c., neutron diffr. determ. 2=21350
    Fe, exchange integral sign change 3=980
    Fe, face-centred lattice 0=11912
    $FeBr_2$, theory 0=13848
    $FeCO_3$, moment meas. 4=7298
    $FeCO_3$, theory 0=13848
    $FeCO_3$, transition, rel. to specific heat, 1.6° to 70°K 3=17659
    $FeC_2O_4 \cdot 2H_2O$, transition, from Mössbauer effect 4=9812
    $FeCl_2$, at low temp. in applied mag. field 0=13849
    $FeCl_3$, mag. struct., neutron diffr. study 2=18927
    $FeCl_2 \cdot 4H_2O$, 0.35-4.2°K 4=13114
    $FeCl_2 \cdot 4H_2O$, proton resonance spectrum 4=28899
    $FeCl_2 \cdot 4H_2O$, susceptibility at low temps. 1=6385
    $FeCl_2$, theory, one-ion approx. 0=13848
    Fe—Co alloys, γ-phase 3=3146
    Fe_3Cr, rel. to atomic ordering 2=16925, 18924
    $FeCr_2O_4$, neutron diffr. exam. 4=13268
    FeF_2 0=3104
    FeF_2, anisotropy energy calc. 3=8658
    FeF_2, mag. susceptibility 1=9044
    FeF_2, sublattice magnetization, effect of large uniaxial anisotropy 0=21060
    Fe—Gd system 4=23030
    $FeGe_2$ 4=26309
    $FeGe_2$, structure, 77°K 4=28856
    Fe—Ge, saturation moment rel. to composition 3=1005
    FeI_2, theory 0=13848
    Fe—Mn alloys, f.c.c. and h.c.p., rel. to Mossbauer effect 3=15907
    Fe—Mn alloys, suscept rel. to temp. 3=6733
    Fe-Mn alloys susceptibility rel. to temp. 2=6682
    β-.$FeNaO_2$, crystal struct., atomic 4=13267
    β—$FeNaO_2$, mag. structure, space group, meas. by neutron diffraction 4=28839
    β—$FeNaO_2$, spin structure, X-ray and neutron diffraction studies 4=1853
    Fe-Ni alloys, temp. behaviour 2=14813
    Fe—Ni alloys, temp. behaviour 3=6734
    Fe—Ni—Mn alloys, disordered, long-range 3=13284
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    FeO, cryst. transition point and cryst. distortion 2=2267
    FeO, magnetic structure defects 0=3094
    FeO, superexchange and delocalization effects 0=13851
    Fe_2O_3, α-phase, fine particles 20-400 A diam. 3=3137
    Fe_2O_3, α-phase, transformations 3=5029
    α-Fe_2O_3, antiferromag. Curie point 2=23630
    α-Fe_2O_3, Curie temp. meas. 4=10299
    α-Fe_2O_3, exchange interactions 2=6681
    α-Fe_2O_3 fine grains, superantiferromagnetism 3=1093
    α-Fe_2O_3 fine grains, suscept. rel. to diam., 20 to 400 A 3=1094
    Fe_2O_3 fine particles 3=8697
    α-Fe_2O_3 fine particles, susceptibility meas. 3=1095
    α-Fe_2O_3, mag. moment, superexchange interaction 0=11902
    αFe_2O_3, natural and synthetic 3=1019
    α-Fe_2O_3, spin fluctuations, neutron diffr. study 1=20118
    Fe—Ni alloys, spin wave energies and exchange parameters 4=22990
    FeP_2 3=1018
    $Fe_3(PO_4)_2 \cdot 8H_2O$ (vivianite) 1=20269
    Fe—Pt alloys, γ-phase 3=3146
    $FePt_3$, mag. structure, depend. on degree of long-range order 4=26352
    Fe—Rh alloys, mag. moments and unpaired spin densities 4=20544

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    $Fe_{0.996}S$, high- and low-temp. arrangements by neutron diffraction 3=1023
    $FeS_{1.00, 1.05, 1.07}$, easy axis direction 3=2698
    FeS_x, (x = 1.00-1.14), easy direction of magnetization 1=14760
    FeS, susceptibility anomaly in the α-transformation 0=18209
    $FeSO_4$, structure by neutron diffr. 2=6679
    Fe—Si alloys 4=1854
    (Fe-3.8%Si) domain struct. at high temps. 2=8632
    FeSi, neutron diffrn. search for antiferromag. props. 3=25543
    $FeSn_2$, moments, Curie temp. etc. 1=14761
    Fe—Sn, saturation moment rel. to composition 3=1005
    $FeSn_2$, neutron diffr. study 2=8660
    $FeSn_2$, neutron diffraction study 3=1111
    $FeTe_2$, susceptibility at 15-100°K 0=4482
    (1-x)$FeTiO_3$—xFe_2O_3, 2nd nearest neighbour Fe-layer interact. 3=1022
    $FeVO_3$ 0=11914
    Gd, f—conduction electron spin coupling 3=8400
    Gd, helical antiferromagnetism 2=6680
    Gd, helical antiferromagnetism 3=6732
    GdAg—GdIn 4=28764
    GdB_6 1=6383
    $GdCl_3 \cdot 6H_2O$, at low temp. 4=17670
    Gd—Co alloys, spin arrangements rel. to comp. 3=1000
    Gd—Fe alloys, spin arrangements rel. to comp. 3=1000
    $GdMn_2$, Laves-phase, various props. 3=15910
    Gd_2Se_3, below 6°K, Curie temp. versus resistivity 4=13181
    Ge, n-type, heavily doped, transformation 3=23135
    $Ge[Co_2]O_4$, spinel, Néel temp. 4=13266
    $Ge[Fe_2]O_4$, spinel, Néel temp. 4=13266
    $GeNi_2O_4$, crystal struct., atomic 4=13267
    $GeNi_2O_4$, neutron diffn. investign. 4=28855
    $Ge[Ni_2]O_4$, spinel, Néel temp. 4=13266
    He^3, solid, nuclear suscept. in α-phase 4=2911
    He^3, solid, quantum theory 2=15840
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    Ho , press. var. 4=20567
    $HoCo_5$, magnetic structure and mag. moment 3=15731
    HoD_2, magnetic structure 3=15911
    $HoFeO_3$, neutron diffr. study, 1.25-955°K 0=10187
    $HoMn_2$, Laves-phase, various props. 3=15910
    Ir salts, exchange interactions 0=8067-8
    Ir salts, exchange interactions, theory 0=8069
    K—Ba, Sr or Pb Fe garnet, exchange anisotropy 4=13230
    $KCoF_3$ 0=3104
    $KCoF_3$, magnetic anisotropy 78°-300°K 1=20164
    $KCuCl_3$ 3=18314
    $KCuF_3$ susceptibility, 80°—700°K 1=12548
    $KFeF_3$ 0=3104
    $KFeF_3$ susceptibility, 80°—700°K 1=12548
    K_2IrCl_6, theory 4=26403
    $KMnCl_3$, from e.p.r. Mn^{++}, temp. var. 4=1881
    $KMnF_3$, anisotropy, theory 1=2465
    $KMnF_3$, depend. on sample preparation 1=1247
    $KMnF_3$, hyperfine field and ground-state spin alignment 2=23689
    $KMnF_3$, n.m.r. of F^{19}, u.s. modulation 4=20614
    $KMnF_3$, n.m.r. meas. of Mn^{55}, mixing with electronic resonance, meas. 4=28903
    $KMnF_3$, n.m.r. of Mn^{55} 4=13345
    $KMnF_3$ susceptibility, 80°—700°K 1=12548
    $KMnF_3$, transition, 84.3°K, and specific heat 3=8365
    $KMnF_3$, transition at 88.5°K 0=11955
    K_2NiF_4, interactions, order, neutron diffn. study 4=28858
    $KNiF_3$, rel. to optical spectra 3=12892
    K_2NiF_4, mag. struct., neutron diffr. study 2=12799
    K_2NiF_4, pile-up disorder, neutron diffraction study 4=10301
    K_2NiF_4, stacking faults, neutron diffr. exam., calc. 4=13275
    K_2NiF_3, structure by neutron diffr. 3=3138
    $KNiF_3$, magnetic anisotropy 78°-300°K 1=20164
    $KNiF_3$ susceptibility, 80°-700°K 1=12548
    $LaCrO_3$ 0=3104
    $LaCrO_3$ 2=2298
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    $LaMnO_3$, superexchange interaction 0=18207
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    La_2NiO_4, interactions, order, neutron diffn. study 4=28858

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$LiCuCl.2H_2O$, coexistence with paramag. state 2=8609
$LiCuCl_3.2H_2O$, n.m.r. studies 1=20165
$LiCuCl_3.2H_2O$, neutron-diffraction study 4=7301
$LiFeO_2$, ordered and disordered, by neutron diffr. and Mössbauer 4=4394
$LiMnPO_4$, Mn—O—P—O—Mn superexchange 3=18151
$Mg[Cr_2]O_4$, spinel, Néel temp. 4=13266
Mg–Mn alloys, low-temp. transition 2=14763
$Mg[V_2]O_4$, spinel, Néel temp. 4=13266
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α-Mn, hyperfine coupling 4=20568
Mn pairs in MgO biquadratic superexchange theory 4=23025
Mn telluride, susceptibility, structure 3=11104
Mn-Tutton salt 3=1058
Mn^{++} ammine and anhydrate salts, susceptibility at low temp. 1=14765
Mn_2As, atomic moments, mag. struct. 2=12741
Mn_2As, rel. to temp. 1=11459
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$MnAu_2$ 0=1818
$MnAu_2$, ferromagnetic transform., at low temps, exchange interaction mechanism 3=20573
$MnAu_2$, mag. structure, influence of mag. field 0=8063
$MnAu_2$, magnetization in pulsating fields, temp. depend. 3=3136
$MnAu_2$, neutron diffrac. study 1=12546
$MnAu_2$, transformation, threshold field magnitude and temp. rel. to pressure 3=18116
$MnBr_2$, neutron diffract. studies 0=13849
$MnBr_2,4H_2O$, nuclear orientation of Mn^{54} and Co^{60} 1=3585
$MnBr_24H_2O$, susceptibility 1-300°K 0=16144
$MnCO_3$, Curie point shift with press. 2=18926
$MnCO_3$, mag. moment, superexchange interaction 0=11902
$MnCO_3$, magnetic sp. ht. 2=4237
$MnCO_3$, magnetic spec. heat 3=3145
$MnCO_3$, neutron diffraction study 0=11851
$MnCO_3$, ordering, effect on optical absorption 4=17574
$MnCl_2$, liq. He temps., rel. to specific heat 3=2731
$MnCl_2.4H_2O$, nuclear orientation of Mn^{54} and Co^{60} 1=3585
$MnCl_24H_2O$, susceptibility 1-300°K 0=16144
$MnCl_24H_2O$, susceptibility and relaxation 0=10095
Mn—Cr, mag. structure meas. by neutron diffn. susceptibility meas. 4=29146
$Mn_{2-x}Cr_xSb$, ferrimag. transition mech. 4=17661
$Mn_{2-x}Cr_xSb$, x = 0.023-0.10, structure 3=23197
$Mn_{2-x}Cr_xSb$, X-ray and mag. studies 3=13282
Mn—Cu, transition, Mn rich 4=13270
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MnF_2, absence of antiferromag. domain walls 2=758
MnF_2, antiferromagnetic domain walls 4=26450
MnF_2, antiferromagnetic excitations 4=15661
MnF_2, Curie temp. shift by high pressure 0=8073
MnF_2, domains, polarized neutron study 2=10684
MnF_2, effect of cooling 3=3143
MnF_2, lattice thermal cond. below Néel temp. 3=25212
MnF_2, magnetization of sublattice at 0°K 0=6272
MnF_2, microwave Faraday rotation, 30-300°K 0=3098
MnF_2, n.m.r. of F^{19} under pressure, 4.2-35.7°K, Néel temp. press. depend. 0=10249
MnF_2, nuclear spin—lattice relax., calc. 3=18137
MnF_2, rel. to optical absorption bandwidth 3=25461
MnF_2, optical absorption studies 1=1162
MnF_2, piezomagnetism 4=30726
MnF_2, powdered 0=3107
MnF_2, spin-flopping in high mag. fields 1=6380
MnF_2, spin-wave scatt. of phonons, analysis 4=28852
MnF_2, spin wave dispersion, 4.2°K, neutron diffr. exam. 4=13272
MnF_2, spin wave theory rel. to expt. 4=7254
MnF_2, spin waves, dispersion relation, neutron inelastic scatt. 1=14762
MnF_3, superexchange interaction 0=18207
MnF_2, susceptibility, 1°-45°K 3=18115
MnF_2, susceptibility, n.m.r. det. 4=26353
MnF_2, u.s. attenuation, near Néel temp. 4=1388
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$MnF_2—ZnF_2$, optical absorption studies 1=1162

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$Mn_3Fe_2Ge_3O_{12}$ garnet, antiferromagnetism 0=11893
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Mn—Ge, saturation moment rel. to composition 3=1005
$Mn_{2.35}Ge$, susceptibility, temp. depend. 1=1249
Mn_5Ge_2, regions of perfect compensation 4=23020-1
$Mn(HCOO)_2.2H_2O$, linear chain antiferromagnetism, rel. to crystal structure 4=17671
MnHg, susceptibility 1=20166
MnI_2, below 3.40°K 2=8661
$MnNH_4$-Tutton salt, below 1°K 0=13738
Mn–Ni alloys, 2-300°K 0=13853
Mn–Ni disordered alloys, 2-300°K 0=13853
MnO, additional biquadratic exchange term in spin Hamiltoniam 3=20627
MnO, and crystal lattice distortion, anisotropic 4=13271
MnO, effect on elasticity, temp. var, 3=6774
MnO fine grains, superantiferromagnetism 3=1093
MnO, mag. susceptibility, magnetostriction 2=12717
MnO single crystal, mag. anisotropy 1=9045
MnO single crystal, susceptibility 0=13850
MnO, superexchange and delocalization effects 0=13851
MnO, superexchange interaction 0=18207, 21058
MnO, superexchange in, theory 0=1817
MnO, susceptibility rel. to temp. 3=1015
MnP, 4°-50°K meas. 4=28819
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MnRh ordered alloy, 170-4°K range 3=15752
MnS, exchange interactions 1=3918
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β-MnS, spin arrangement, Moriya interaction appl. 2=12796
$MnSe_2$, transitions, temp. var., neutron diffn. meas. 4=28822
MnSiF .6H O, nuclear orientation of Mn^{54} and Co^{60} 1=3585
$Mn_{1.77}Sn$, anomalous properties 1=14764
Mn—Sn, saturation moment rel. to composition 3=1005
$MnSn_2$ 1=14761
$MnSn_2$, anomalous properties 1=14764
$MnSn_2$, transitions, temp. var., neutron diffn. meas. 4=28822
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- Cr_2O_3 fine grains, superparamagnetism 3=1093
- Cr_2O_3, ion pair model, Oguchi analysis 3=25503
- Cr_2O_3–Al_2O_3 catalysts 0=11805
- Cr_2O_3–SiO_2 catalysts 0=11805
- $Cr_2O_7K_2$ 2=6655
- CrO_4K_2 2=6655
- CrSe(1·00 to 1·07), susceptibility rel. to temp. 1=12512
- Cr—Si, rel. to sp. heat and heat of formation 4=1802
- Cr—Te alloy, magnetoresistance above Curie point 1=1237
- Cu-butyrate monohydrate, susceptibility rel. to
- Cu films, partially oxidized, susceptibility at 25°C, erratum 4=17625
- Cu, rel. to gaseous impurities 2=8608
- Cu, nuclear cooling by isentropic demagnetization 1=4520
- Cu-stearate, susceptibility rel. to temp. 1=20042
- Cu Tutton salt, spin–spin interaction 2=21380
- Cu—Al containing a little Mn 4=7219
- Cu—Co alloys, molten, susceptibility 1=152
- Cu—Co, magnetic moments rel. to ageing 1=11425
- Cu—Cr alloys, molten, susceptibility 1=152
- Cu—Fe alloys, molten, susceptibility 1=152
- Cu—Ge containing a little Mn 4=7219
- $CuK_2Cl_4.2H_2O$, susceptibility at low temps. 1=14793
- Cu—Mn alloys, molten, susceptibility 1=152
- Cu—Mn alloys, superparamagnetic properties 3=25506
- Cu-Mn alloys, susceptibility, 100-1100°K, composition depend. 4=26269
- Cu–Mn, polycryst., above Néel point 1=20046
- Cu—Mn, polycryst., above Néel point 3=4997
- Cu_2MnSb Heusler alloy 2=14812
- $Cu(NH_3)_2SO_4$, susceptibility 0=21027
- $Cu(NH_3)_4SO_4.H_2O$, exchange interactions 4=10245
- $Cu(NH_3)_4SO_4.H_2O$, susceptibility 0=21027
- Cu—Ni alloy, rel. to short range order 3=3085
- Cu–Ni alloys, effect of heat treatment and deform. 2=18891
- Cu–Ni alloys, superparamagnetism, 2-300°K, neutron irrad. effects 0=2980

Magnetic properties of substances—contd
paramagnetic—contd
$CuO_{0.67}$ 4=4329
Cu_2O, changes during adsorpt. of O and CO 4=23596
Cu_2O, rel. to stoichiometry 2=12756
$CuSO_4$, susceptibility 0=21027
$CuSO_4.5H_2O$. 0.3-4.2°K 4=22948
$CuSO_4.5H_2O$, ionic susceptibilities, principal, meas. method 4=26268
$CuSO_4.5H_2O$, paramagnetic susceptibility measurement, method 1=17937
$CuSO_4.5H_2O$, susceptibility, 0.03-1°K 2=6282
$CuSeO_4.5H_2O$, paramagnetic susceptibility measurement, method 1=17937
$CuSeO_4.5H_2O$, susceptibility, 0.03-1°K 2=6282
$DCrO_2$, susceptibility 1=11413
Dy ethyl sulphate, mag. susceptibility, 1-20°K, mag. dipole interactions 0=13734
Dy, polycrystalline, paramag. susceptibility 1=6259
Dy, spiral structure model 3=3075
Dy, 300°-1500°K 3=11033
DyH_{2-3}, Curie–Weiss law 3=25507
Dy_2O_3, hyperfine splitting of Dy^{161} levels 1=20053
Dy_2O_3, hyperfine splitting of Dy^{161} levels 3=4999
Dy_2O_3, mag. hyperfine interactions and relaxation phenomena 4=28777
Dy_2O_3 at 300°-1250°K 2=16894
$Dy_{5.07}Pd_{1.93}$, above 41°K 4=13220
Er, polycrystalline, 300-1500°K 0=11810
ErH_{2-3}, Curie–Weiss law 3=25507
Eu, polycrystalline, susceptibility, expt. and theory 1=7734
Eu, susceptibility, 1.3-300°K 0=11808
$Eu_{0.5}Gd_{1.6}Se_{2.9}$ 4=13181
Eu_2O_3, susceptibility, 300-1300°K 4=15624
Fe–alum, adiabatic demagnetization 0=19568
Fe amalgam, correl. with grain dimensions 0=13764
Fe ammonium alum., susceptibility 1=12522
Fe atoms in dilute solid solution, mag. moment, effect on susceptibility 1=3882
Fe cpds., Fe^{57} Mössbauer effect, elec. quadrupole splitting and nuclear volume effect 1=6261
Fe cpds., Mössbauer effect in Fe^{57}, "isomer" shift interpretation 1=6262
Fe fluosilicate, susceptibility, 1.6-77°K 0=18164
Fe group ions in solution, moments 4=2708
Fe group salts, anisotropy, theory 0=21021
Fe impurities in transition metals, by Mössbauer effect 2=21294
Fe^{2+} ions in oxides, rel. to cryst. field 2=18892
Fe salts, susceptibility rel. to temperature 3=13231
Fe sulphide, susceptibility, temp. anomaly 0=668
Fe, susceptibility, up to 1200°C 0=11809
Fe^{57} in Al_2O_3, Mössbauer effect hyperfine struct. 4=30501
Fe–Al alloys, effect of atomic ordering 4=13117
Fe–Al, high temps., ordering 2=23635
$FeAs_2$ and cond. elec., temp. var. 3=6601
FeAsS, and cond. elec., temp. var. 3=6601
FeB, 150-800°K range 3=1124
$FeCl_2$, near Néel temp., neutron small-angle scatt. 3=11035
$FeCl_2$, susceptibility, isotropic character 3=5049
$FeCl_2.4H_2O$, susceptibility at low temps. 1=6385
$(Fe, Co)_{1.67}$ Ge, Pauli paramagnetism 4=4330
Fe–Cr–Ni, neutron scatt. study 4=15628
FeF_2, F^{19} n.m.r., hyperfine interactions with magnetic electrons 0=10248
Fe–Ge alloys, meas. and theory 3=11030
Fe^{2+} $(KSO_4)_2.6H_2O$, mag. anisotropy and susceptibility, ligand field theory 4=30705
Fe–Mn, neutron scatt. study 4=15628
Fe–Mo, high temps., ordering 2=23635
$Fe(NH_4SO_4)_2.6H_2O$ 1=9017
Fe–Ni alloys, 77-290°K 0=1787
Fe–Ni alloys, temp. and Fe conc. depend. 1=5063
$(Fe, Ni)_{1.67}$ Ge, Pauli paramagnetism 4=4330
α-Fe_2O_3, fine grains, superparamagnetism 3=1093
α-Fe_2O_3, Fe^{57} internal field Mössbauer study 2=16918
$5Fe_2O_3.3M_2O_3$ (M = Y and rare earths), susceptibility 1=20142
$\delta FeOOH$, superparamag. props. 2=12694
$FeSO_4$, susceptibility in 0.5 MOe fields 2=23632
$FeSb_{0.8}$, susceptibility 1=6271

Magnetic properties of substances—contd
paramagnetic—contd
Fe–Si alloys, up to 1200°C 0=11809
$(1-x)FeTiO_3-xFe_2O_3$, superparamag. clusters 3=1022
Fe–V alloys, Fe-rich, susceptibilities 2=12739
Gd cpds., susceptibility 2=8605
Gd manganite, temp. depend. 0=11884
Gd, polycrystalline, paramag. susceptibility 1=6259
Gd polycrystals, above Curie point 0=11877
Gd, 300°-1500°K 3=11033
$Gd_3Co_2GaGe_2O_{12}$ garnet 0=11893
$GdCoO_3$ 4=26649
$Gd_3Ni_2GaGe_2O_{12}$ garnet 0=11893
Gd_2O_3 at 300°-1500°K 2=16894
Gd–Y alloys, susceptibility rel. to temp. 4=28778
Ge, n-type, lightly doped, var. with carrier conc. 3=23135
Ge, p-type, susceptibility, 300° to 1.3°K, rel. to extrinsic carrier density 2=23637
Ge–Si alloys, susceptibility rel. to temp. 2=23636
FeF_2, antiferromagnetic, low-temp. residual paramagnetism 4=26270
$HCrO_2$ 1=5075
$HCrO_2$, susceptibility 1=11413
HF, susceptibility 2=20807
He^3, liquid, mol. field theory model 4=8547
Hf–Ta, b.c.c., susceptibility rel. to temp. 3=999
HgTe, susceptibility, 90-400°K 3=20563
Ho, polycrystalline, 300-1500°K 0=11810
Ho, susceptibility 2=8828
Ho, 300°-1500°K 3=11033
$Ho_{5.04}Pd_{1.96}$, above 27°K 4=13220
Ho–Y alloys, adiabatic demagnetization 1=11414
Ho–Y solid solns., rel. to temp. and composn. 4=1808
In, susceptibility, room temp. to 20.4°K 0=21026
Ir cpds. with rare earths, Curie points and mag. moments 0=1776
K ferricyanide, mag. d-wavefunctions 2=18509
$KBrO_3$, susceptibility, rel. to temp. 1=14676
KCl, F'-centre 3=2840
$KClO_3$, susceptibility, rel. to temp. 1=14676
$KCoF_3$, mol. field approx., n.m.r. study 4=13343
$KCrO_4$ soln., magnetic susceptibility 3=146
$KCr(SO_4)_2.12H_2O$, zero-field spin absorption 4=10242
KIO_3, susceptibility, rel. to temp. 1=14676
KMnO 2=6656
$KMnO_4$ soln., susceptibility 3=146
$La_2Co_3(NO_3)_{12}.24H_2O$, phonon scatt., reson. low temp. 3=15427
La–Sr perovskites, susceptibilities 1=14678
Li, meas. by e.s.r. saturation 4=4331
$LiCuCl.2H_2O$, coexistence with antiferromag. state 2=8609
LiF, isotope shift of paramag. term 2=18455
LiF, thermal-neutron irrad. 4=1803
LiH, orbital calc. 2=3770
Lu, temp. depend. of suscept., meas. 4=20519
Mg and transition metal double nitrates, susceptibility meas. 2=16893
Mg–Fe alloys, low-temp. e.s.r. study 2=14763
$MgNi_2$, susceptibility 0=16126
MgO:Cr, spin–phonon relaxation 0=13732
Mn alloys, interactions 3=1001
Mn ammines, susceptibility 0=21027
Mn ammonium alum., susceptibility 1=12522
Mn cpds., susceptibility in 0.5 MOe fields 2=23632
Mn ferrite, paramag. susceptibility temp. depend. 4=26272
Mn, susceptibility in α, β brasses 3=23140
MnAlGe, intermetallic cpd., effect of milling 4=7218
$MnAu_2$, susceptibility and magnetization 2=23243
$MnAu_3$, disordered and ordered phases 2=4201
Mn_3Au 0=13737
MnB, 150-800°K range 3=1124
$MnCl_2.4H_2O$, susceptibility and relaxation 0=10095
Mn–Cu alloys, above m.p. 3=23906
Mn–Cu–Al and Mn–Cu–Ge alloys, dilute in Mn 4=7219
MnF_2, exchange integrals, by neutron scatt. 3=3120
$Mn_xFe_{3-x}O_{4+\gamma}$ $(x > 1)$, disaccommodation spectrum, role of Fe^{2+} and cation vacancies 4=13237
$Mn_xFe_{3-x}O_4$, Mössbauer effect study 4=3962
$Mn(HCOO)_2.2H_2O$, 0.35-4.2°K, exchange interactions 4=13114
Mn_4N-type cpds., mag. struct. rel. to model 2=8603

Magnetic properties of substances—contd
paramagnetic—contd
$MnNH_4$–Tutton salt, below 1°K 0=13738
MnO fine grains, superparamagnetism 3=1093
γ-MnO_2, suscept. meas., rel. to depolarization 4=10246
Mn_2Pd_3 ordered alloy, mag. structure 4=13598
MnRh ordered alloy, 700-170°K range 3=15752
$MnSO_4.H_2O$, Voigt effect 0=21031
Mn–Sb alloys, high temp. depend. 2=23634
Mn—Si alloys at high temps. 4=10273
$MnUO_4$, structure at low temps. 3=3139
Mo, susceptibility 4=7356
Mo–Nb alloys, effect of Fe on susceptibility temp. depend. 1=3882
MoO_3 2=6655
Mo—Re alloy, b.c.c., rel. to H-affinity 3=3084
Mo—Tc alloys, down to superconductivity 4=13119
N oxides trapped in doped X-ray irrad. K halides 1=14350
$[(NH_2)_2CS]_4NiCl_2$, Curie—Weiss law 4=13064
$(NH_4)_2Cr_2O_7$ soln., susceptibility 3=146
NO, in clathrates, low-temp. susceptibility 2=2268-9
Na, cond. electron spin suscept. meas. 3=11031
Na, cond. electron susceptibility meas. by e.s.r 3=1053
Na, meas. by e.s.r. saturation 4=4331
$Na_2Cr_2O_7$ soln., susceptibility 3=146
NaF, M- centres, paramagnetism question 3=819
Na_xWO_3, susceptibility 2=4207
Nb, susceptibility 4=7356
Nb, susceptibility, liq. He to room temp. 0=13736
Nb—Mo alloy, b.c.c., rel. to H-affinity 3=3084
Nb–Mo, b.c.c., susceptibility rel. to temp. 3=999
Nb—Mo alloys, susceptibility 4=7356
Nb—Re alloy, b.c.c., rel. to H-affinity 3=3084
Nb—Ru alloys 3=22662
Nb–Ta, b.c.c., susceptibility rel. to temp. 3=999
Nb—Tc alloys, susceptibility 4=7356
Nd gallate, susceptibility, temp. var. 2=2271
Nd, polycrystalline, 300-1500°K 0=11810
NdMg nitrate, anisotropic g-factor 2=12384
Ni ammines, susceptibility 0=21027
Ni films, from magnetoresistance meas. 3=17825
Ni films, at 10^{-5} mm Hg, superparamagnetism 2=8602
Ni grains, super, spontaneous mag., temp. var., 77-600°K 4=4332
Ni, polycryst., up to 1500°K 4=1804
Ni, saturation moment decrease by H chemisorption 4=22949
Ni, susceptibility, effects of s–d exchange 1=14674
Ni thin films, from elec. cond. and Hall effect meas. 0=13813
Ni ultra-fine particles, superparamagnetism in Ar atmosphere, rel. to pressure 3=11036
Ni^{2+} ions in oxides, rel. to cryst. field 2=18892
Ni_3Al, susceptibility rel. to temp. 4=17626
NiB 1=20063
NiB, 150-800°K range 3=1124
$NiBr_2$ susceptibility rel. to temp., above 60 °K 1=20169
$Ni(CH_3COO)_2.4H_2O$, 0.35-4.2°K 4=13114
$NiCl_2$, susceptibility in 0.5 MOe fields 2=23632
$NiCl_2.6H_2O$, mag. contribution to low temp. specific heat 0=4266
$NiCl_2.6H_2O$, susceptibility, 1.4-20.4°K 0=21028
Ni_3Fe, susceptibility rel. to temp. 4=17626
NiK–Tutton salt, susceptibility, 1.4-20.4°K 0=21028
Ni–Mn alloys, susceptibility rel. to temp. 4=17626
Ni–Nb alloys, meas. up to 1500°K 4=7221
Ni, Ni—Cu, spin paramag. susceptibility, temp. depend. 3=23143
NiO fine grains, superparamagnetism 3=1093
$Ni_2O_3.H_2O$, Curie–Weiss rel. 4=4333
Ni_3Pt, susceptibility rel. to temp. 4=17626
α-$NiSO_4.6H_2O$, $NiSO_4.7H_2O$, low temp. susceptibilities 3=8644
$NiSO_4.7H_2O$, ionic susceptibilties, principal, meas. method 4=26268
NiSn, above liquid nitrogen temp., mag. moments 2=10638
Ni-Ta alloys 4=26273
Ni—Zn ferrites, susceptibility 3=20336
Ni^{2+} in ZnO and CdS, susceptibility 4=17616
NpO_2, quadrupole—quadrupole interaction effects 1=6426

Magnetic properties of substances—contd
paramagnetic—contd
Os cpds. with rare earths, Curie points and mag. moments 0=1776
OUO^{++}, effect of 6d orbitals and π bonding 1=3561
Pb, susceptibility, room temp. to 20.4°K 0=21026
Pd alloys, binary, meas. and theory 3=1126
Pd alloys, not explicable by rigid band model 4=17624
Pd alloys, susceptibility, 120°-1100° C 4=4334
Pd, rel. to atomic electron correl. 4=1839
Pd containing rare earth ions, polarization effects, long range 4=26420
Pd—dilute Fe group alloys, mag. coupling, splitting of d orbitals 1=9018
Pd, Gd-doped, susceptibility 2=21372
Pd, 1.85-293°K meas. 3=13229
Pd, small crystals, rel. to bulk meas. 2=4208
Pd, susceptibility, effects of s—d exchange 1=14674
Pd—Cr hydrogenized alloys 1=6257
Pd–Fe, hydrogenated alloys 0=1775
Pd, Pd–Ag, Pd–Rh, susceptiblity and electronic sp. ht. 3=13228
Pd—Rh alloys, 1.85-293°K, meas. 3=13229
Pr ethyl sulphate, susceptibility 2=16892
Pr metal 1=10129
Pr, 1.5°-300°K 2=8606
Pr, simple model rel. to crystal structure 4=7222
Pr ethyl sulphate, susceptibility 4=13120
$PrCl_3$, anhydrous, 4·4°-300°K meas. 4=7217
$PrO_{1.72}$ and $PrO_{1.83}$, meas. rel. to crystal fields at Pr ions 4=13121
Pr_2O_3, meas. rel. to crystal fields at Pr ions 4=13121
Pt metal, Pt–Au and PtIr alloys 4=28780
Pt, orbital and spin contributions, theory 4=17699
Pt, susceptibility, effects of s–d exchange 1=14674
$PtSn_2$, Pt^{195} resonance Knight shift 3=5051
Ru cpds. with rare earths, Curie points and mag. moments 0=1776
S vapour, susceptibility rel. to S_2 partial press. 2=7474
Sc, susceptibility, anisotropy of single crystals 4=10143
Sc, susceptibility, temp. depend. 4=26013
Sm, not paramag. below 155°K 2=8606
Sm, susceptibility, 300-1400°K, rel. to Van Vleck theory 0=18169
Sm^{3+} ion in Sm_2O_3, paramagnetic susceptibility 1=12518
Sn, normal and supercond., moment and susceptibility 1=10640
Sn, susceptibility, room temp. to 20.4°K 0=21026
$Sr(NiW)_{[illegible]}O_3$, susceptibilities, phase transforms. 3=8864
Ta, normal and supercond., moment and susceptibility 1=10640
Ta–Re, b.c.c., susceptibility, rel. to temp. 3=999
Ta–W, b.c.c., susceptibility rel. to temp. 3=999
Tb hexa-antipyrene tri-iodide, susceptibility 3=1125
Tb, 1.4°-500°K meas. 3=18113
Tb, 300°-1500°K 3=11033
Tb, polycrystalline, paramag. susceptibility 1=6259
$Tb_{5.1}Pd_{1.9}$, above 62°K 4=13220
Tb—Y solid solns., rel. to temp. and composn. 4=1808
Te susceptibility, temp. var. 3=18063
Th carbides 4=17627
Th, susceptibility, 130-300°K 0=669
Th—Er alloys, adiabatic demagnetization, cooling to 0.1°K 1=11415
Ti alloys, dilute hexagonal, meas. 4=18613
Ti caesium sulphate alum, molecular orbital method 0=16127
Ti^{3+} alum, susceptibility, theory, nature of crystalline fields 0=8034
Ti^{3+} cpds., moments and Weiss consts. 4=26274
TiFe, correl. of low-temp. caloric and magnetic effects 1=1198
Ti–Mn alloys, localized mag. states, rel. to supercond. 4=2923
Ti—Mo susceptibility rel. to H solubility 1=10130
Ti—Nb susceptibility rel. to H solubility 1=10130
TiO, 80°-400°K 3=17894
TiO_2 (rutile and anatase), susceptibility 0=18165
TiO_2 (rutile), electronic suscept. theory 4=13123
TiO_2, Cr^{3+} doped 0=16180
TiO_3 2=6655
Ti–V, b.c.c., susceptibility rel. to temp. 3=999

Magnetic properties of substances—contd
paramagnetic—contd
Ti, V–Ti alloys, temp. variations 3=25509
Tl halides, h.f., ligand field theory 3=20560
Tm, susceptibility, 1.3-300°K 0=11811
Tm, 300-1500°K 0=8030
TmH_{2-3}, Curie–Weiss law 3=25507
U carbides 4=17627
UD_3 and UH_3, β-modification susceptibility 2=10642
U–Mo alloys, stable and metastable, Pauli weak spin (90°-1200°K) 1=10025
U–Mo, susceptibility, 100-300°K 2=6657
UO_2, quadrupole–quadrupole interaction effects 1=6426
UO_2, susceptibility 3=8642
U_2O_5, susceptibility, to determine valency 3=8642
U_3O_8, susceptibility, temp. var. 3=8642
UOS, in paramag. region 3=13283
UOS, susceptibility, temp. var., two Curie consts., explanation 3=15760
U–Zr alloy, X and S, weak-spin 2=620
V alloys with Ti, Cr, Tc, meas. 3=3204
V-base solid solns., rel. to concn. 3=18062
V, between 20 and 293°K 0=21029
V complexes, trivalent, deduction from optical spectra 4=10247
V oxides, transition to antiferromagnetism, effect on spectrum, current carriers 3=6605
V oxides, various, susceptibility temp. variation 0=10101
V^{3+} salts, hydrated, mol. orbital theory of ligand field 4=20520
V^{3+}, susceptibility and anisotropy 0=8033
V–Al alloys, susceptibility 4=26455
V, V–(Cr, Ti) alloys, temp. variations 3=25509
VB, 150-800°K range 3=1124
$V(CO)_6$ 4=2709
V–Cr alloys 4=10346
V–Cr, b.c.c., susceptibility, rel. to temp. 3=999
V–Fe alloys, susceptibilities meas. 3=23141
$VO_{0.5}$–$VO_{1.50}$, suceptibility 2=12757, 14765
VO_2, susceptibility, thermal effects 4=20718
VO_2–TiO_2, mag. susceptibility, 25-90°C, composition depend. 0=18166
WO_3 2=6655
Y alloys with rare earths, adiabatic demagnetization 1=11414
Y, single crystal and polycrystalline 4=17628
Y or Yb garnets, e.s.r. study 0=4516
Yb garnets, Yb^{+++} resonance 0=10239
YbGa garnet, 4°-1000°K, rel. to crystl. field levels 4=1846
YbGa garnet, susceptibility, calc. 4=7336
$Yb_2(SO_4)_3.8H_2O$, susceptibilities, principal, crystal field nature 3=25510
$ZnFe_2O_4$, superparamag, induced by high-press squeezing 4=26275
Zn–Mn (15-35 at.%) h.c.p. structure 3=1006
ZnS : Mn^{++}, antiferromag. coupling, 20-800°K 4=13124
ZnS : MnS, effect of Mn^{2+} exchange coupling 4=10248
Zn–Mn (20%, γ-brass type; and 27% α'-phase f.c.c. Cu_3Au type), Curie temps. 3=1006
Zr–Nb, b.c.c., susceptibility, rel. to temp. 3=999
transitions
(subheading introduced in 1961)
alloy, Curie point, statistical mechanics application 2=2645
calculation, series expansion, Ising or Heisenberg models 4=20509
Coelinvar, Curie temp., press depend., up to 20 kb 4=17652
Curie point determ. by oscillating specimen magnetometer 4=5737
Curie temp. det. from susceptibility, errors 1=20067
Curie temp. meas., from h.f. permeability temp. var. 4=22943
diamond, Ising model, statistics 3=12898
dibenzo-, ditoluene-chromium iodides, from e.s.r., n.m.r., low temps. 4=17669
Elinvar, Curie temp., press. depend., up to 20 kb 4=17652
ferrimag. mineral component of rock, Curie pt. determ. high-freq. method 4=28830
ferro–antiferromagnetic, rel. to atomic inner shell exchange interaction 4=7208
ferro–antiferromagnetic, entropy changes 3=15750

Magnetic properties of substances—contd
transitions—contd
ferromag.–paramag., first order, rel. to disorder 3=1002
ferromag. thin films, Curie point meas. 3=6710
first-order, theory 2=12641
garnets containing V^{5+}, Curie temps. 4=13234
haematite, Fe_2O_3, Morin transition study by Mössbauer effect 4=4379
haematite–ilmenite system, Néel temp. calc. 3=18105
hexammine Ni halides, low temp., unusual 1=7775
lanthanide dinitrides, cubic, crystal field effects 4=1797
lanthanide–Ni cpds. 4=28776
ludlamite, para to antiferromag., from p, P n.m.r., low temp. var. 4=17698
mag. symmetry near Curie point, with total moment ≠0 4=22966
neutron scatt. cross-section change at critical temp. 4=28757
magnetite, Curie temp. change rel. to oxidation 2=12499
magnetite, low-temp. transformation 3=9138
magnon renormalization near transition temp. 3=15751
rare earth Al garnets 4=26342
rare earth Ga garnets 4=26342
rare-earth metals, rel. to elec. resistance 3=13032
rare-earth metals, ferro.-antiferro. transition, drop in thermoelec. power curve 2=2198
spin–phonon coupling, ferromag. transit., u.s. absorption 4=28787
spinels, cubic 2=12671
Supermalloy, ferro–antiferro–paramagnetic transitions at 375 and 448°C 0=8074
Ag–Mn solid solutions, susceptibility 1=17933
Au–Cr alloys, dilute, at low temps. 4=17650
Au–Fe alloys, dilute, at low temps. 4=17650
Au_4Mn, Curie temp. change by hydrostatic pres. 3=11026
Au–Mn alloy, Curie temp. rel. to press. 4=26340
Au–Mn alloys, dilute, at low temps. 4=17650
Au–Mn–In, antiferromag., with comp. 2=10682
$BaTiO_3$ ceramics, Curie point displaced by press. 2=669
Ce, 4.2-300°K, neutron diffraction study 1=9135
Co, susceptibility at γ/d and melting point 3= 8654
$CoCO_3$, Curie point shift with press. 2=18926
$CoCl_2.6H_2O$, paramag.–antiferromag. phase transition 2=21292
$CoCl_2.6H_2O$, phase, from 1°K to Néel temp. 1=7733
$CoCr_2O_4$ 2=12671
CoF_2, Curie temp. shift by high pressures 0=8073
CoF_2–ZnF_2, Néel temp. by n.m.r. 3=1055
$CoSO_4$, antiferro. to ferromag. transition 2=754
$CoSO_4$, antiferro–ferromag. transition at 4.2°K and 12kOe 0=3103
CoV_2O_4 2=12671
Cr alloys, transition meas. using 1 at.% other transition elements 0=13844
Cr, antiferromag., at 40°C 2=10678
Cr, antiferromagnetic transition temp., effect of pressure 4=26349
Cr, paramag.–antiferromag. 4=29104
$CrBr_x$, ferromag. and paramag. Curie points 1=12521
$CrCl_3$, antiferromagnetic 1=20159
$(Cr,Fe)_2O_3$ mixed crystals, Néel temp. 4=1871
CrK alum, P_f^2–T curve and colour transitions 4=28761
CrO_2, Curie temperature, meas. 3=17022
CrO_2, elec. cond. anomaly at Curie temp. 1=14395
Cr–Pt alloy, at 414°C 2=18893
Cr_5S_6 phase, ferrimag.-antiferromag. transition 2=12732
Cr_5S_6, Cr_2S_3, vacancy order–disorder effect, X-ray diffn. meas. 4=28834
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- PbTe, oscillatory, rel. to conduction band 1=17748
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$MnFe_{2-t}Cr_tO_4$, high-field magnetization study 1=20146
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$Mn_xFe_{3-x}O_4$, ferromagnetic props 4=13195
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$Mn_xFe_{3-x}O_4$, magnetic anisotropy, one ion model 4=15652
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$Mn(HCO_2)_2.2H_2O$, mag. susceptibility, low-temp. 4=28769
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MnMg ferrite, mag. domain wall velocity 1=14736
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    $\pi^+ + n \rightarrow \pi^+ + \pi^- + p$ 0=2586
    $\pi^+ + p \rightarrow \pi^- + \pi^+ + n$ 0=2586
    $\pi^- + p \rightarrow \pi^+ + \pi^- + n$, 240 MeV 3=17318
    $\pi^- + p \rightarrow \pi^- + \pi^+ + n$, 360-800 MeV meas. 3=17316
    $\pi^- + p \rightarrow \pi^- + \pi^0 + p$, rel. to ρ-meson spin 3=6079
    π^-/π^+ ratio in photoprod. from D 4=6102
    π^-, in p–He^4 interactions at 630 MeV 0=12933
    π^-, in Σ^- capture by nucleus 2=18346
    $X^0 \rightarrow \pi^+ + \pi^- + \pi^0$ at 1.23 BeV/c 2=5719
    $Al^{27}(p, p'\pi^{\circ}; \pi^{\circ} \rightarrow 2\gamma)$, cross-section, meas. 4=28027
    π^0, ang. distrib. in photoproduction, nuclear size determ. 4=993
    π^0, by 170 MeV bremsstrahlung in Pb, Cd, Cu, Al and C 0=15412
    π^0, $C^{12}(\gamma, \pi^0) C^{12}$ at 155 MeV 2=13847
    π^0, $C^{12} (\gamma, \pi^0) C^{12}$ at 155 MeV 3=6036
    $C^{12}(p, p'\pi^{\circ}; \pi^{\circ} \rightarrow 2\gamma)$, cross-section, meas. 4=28027
    π^0, by $C^{12} + p$ at 24 GeV, energy versus angle 2=303
    π^0 from C–p at 24 GeV/c 2=12192
    π^0, coherent photoprod. on deuteron 3=10178
    π^0, in Coulomb field of Xe nucleus by π^-, ang. distrib. 4=932
    π^0, Coulomb photoproduction at high energies 1=5754
    π^0, cross-sections calc., from scatt. data 0=2585
    $Cu^{64}(p, p'\pi^{\circ}; \pi^{\circ} \rightarrow 2\gamma)$, cross-section, meas. 4=28027
    $d + d \rightarrow He^4 + \pi^0$, 400 MeV deuterons, charge invariance principle, expt. verification 1=19287
    π^0, by $d + d \rightarrow He^4 + \pi^0$, at 400 MeV, charge invariance principle verified 2=22655
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    π^0, $e + d \rightarrow e + d + \pi^0$, dispersion theory 3=19671
    π^0, by $e^- - e^-$, $e^- - e^+$ collisions, proposed lifetime meas. 0=17375
    π^0, in $e^+ + e^-$ 1=9756
    π^0, $e + p \rightarrow e' + p + \pi^0$, meas. 3=7896
    π^0, by $\gamma + d \rightarrow d + \pi^0$ 4=21963
    π^0, by $\gamma + d \rightarrow \pi^0 + d$, at 500 MeV, impulse approx. 2=5708
    $\gamma + He^4 \rightarrow \pi^0 + He^4$ 2=5615
    π^0, from $\gamma + p$, $\gamma + d$, low angles, 190-220 MeV 3=24766
    π^0, by $\gamma + p$ at 900-1200 MeV, cross-sections 0=15415
    π^0, $\gamma + p \rightarrow \pi^0 + p$, 0.6-1.2 BeV meas. 3=15004
    π^0, in $\gamma + p \rightarrow p + \pi^0$ at 740–1140 MeV 2=20389
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    π^0, $\gamma + p \rightarrow p + 2\pi^0$, $(\gamma, 3\pi)$ vertex 3=7895
    π^0, H^3 proton bombarded 2=16220
    π^0, in high-energy interaction in emulsion 0=5598
    $Li^{6,7}(p, p'\pi^{\circ}; \pi^{\circ} \rightarrow 2\gamma)$, cross-section, meas. 4=28027
    π^0, limit for $\sigma(d + d \rightarrow He^4 + \pi^0)$, test of isotopic spin conservation 1=9776-7
    π^0 by neutrons, test of parity conservation 0=15411
    π^0, in n–p collisions at 600 MeV, ang. distrib. 3=15006
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    $O^{16}(p, p'\pi^{\circ}; \pi^{\circ} \rightarrow 2\gamma)$, cross-section, meas. 4=28027
    π^0, in 383 MeV p–p collisions 2=1708
    π°, in p–p collisions at 735 MeV meas. 3=24724
    $Pb^{207}(p, p'\pi^{\circ}; \pi^{\circ} \rightarrow 2\gamma)$, cross-section, meas. 4=28027
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    π^0, photoproduction amplitude, rel. to $(\gamma, 3\pi)$ interaction 1=12099
    π^0, photoprod. analysis 3=19668
    π^0—mesons, photoproduction on Be, Al, Cu, Cd and Ta 3=24762
    π^0, photoprod. on C at 160-200 MeV 0=13044
    π^0, photoprod. from complex nuclei 2=20597
    π°, photoproduction on complex nuclei, coherent and incoherent 1=19232
    π_o, photoprod. from complex nuclei, theory 4=15087
    π^0, photoprod. and Compton scatt. on p, threshold anomalies 2=22565
    π^0 photoproduction from deuterium 1=8481
    π^0 photoproduction on deuterium at 170 to 210 MeV 3=4427
    π^0 photoprod. on deuterium at 170 to 210 MeV 2=3382
    π^0, photoproduction on deuterons, dispersion relations 1=16845
    π^0 photoproduction in electronic Coulomb field 1=16843
    π^0, photoproduction in external Coulomb field, lifetime study 1=2079
    photoproduction, $\gamma + p \rightarrow p + \pi^0 + \pi^0$ and $\rightarrow n + \pi^+ + \pi^0$, at ~1 BeV, ang. distrib. 1=2092
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  - π^0, from $\pi^- + n$ reaction at 2.8 BeV/C 3=4440
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  - π^0, by π^- reaction, 960 MeV 2=20405
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  - π^0 in π^-—Xe collisions at 8.4 GeV/c 3=2483
  - π°, by 9 GeV/c π^- in Xe 4=30251
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  - π^0, by p + d, ratio to π^+ production, e.m. corrections 0=11170
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  - π^0, in p–p collisions 400-665 MeV, ang. distrib. 0=11163
  - π^0, by p + p, at 1 BeV, rel. to isobar theory 0=1279-80
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  - π^0, single photoproduction in H 1=8479
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  - $CFCl_3$, centrifugal distortion consts. 4=6616
  - CH_4^+, Jahn—Teller distortions 2=22983
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  - H_3O^+ ion, LCAO MO study, rel. to expt. 1=19654
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  - K_2HgI_4, $K_2HgI_3.H_2O$, powder, by spectra, diffuse reflectance, u.v. 3=23557
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  - SeF_4, electron diffr. meas. 3=25113
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  - $(SiH_3)_3N$, planar, from zero value of electric dipole moment 4=6605
  - $Sr(OH)_2.8H_2O$, OH bond orientation 3=4968
  - TiI_4 0=1496
  - TiO 2=14253
  - $UO_2{}^{++}$ 1=11104
  - USe, covalent bond 2=3771
  - U_2Se_3, covalent bond 2=3771
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  - XeF_2, XeF_4, calc. 3=15355
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  - Y halides, electron diffr. study 0=15774
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  - acetone, from microwave spectrum 0=4212
  - acetyl chloride 1=6005
  - acetyl cyanide, from microwave spectrum 0=2763
  - acetyl fluoride, from microwave spectrum 0=2762
  - N-acetyl methionine, free radicals due to γ-irrad. 2=16550
  - acetylenes, substituted 1=3537
  - alkane chain, hindered, mean-square length 0=17858
  - n-alkanes, average dimensions 1=12329
  - alkanes, branched, rel. to phys. props. 4=9753
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  - 1-alkenes, rotational isomerism 0=15783
  - n-alkyl chlorides, rel. to Townsend coeffs. 1=1890
  - n-alkyl free radicals, isomerization 0=746
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  - benzene-chromium compounds 1=11103
  - benzene, use of configuration-interaction method 4=9694
  - benzene, electron diffr., least-squares study 0=15782
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  - benzene pos. and neg. ions, Jahn–Teller distortions 0=17768
  - benzene-iodine complex 0=15779, 20685
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  - p-benzoquinone, from excited state 0=15707
  - 1:12-benzperylene 0=4656
  - bis-acetylacetone beryllium 0=8238
  - bis (N, N–diethyldithiocarbamate)–Cu 1=20568
  - bis (N, N- diethyldithiocarbamate)- Ni(II) 1=17372
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  - butyl cyanide, tertiary, microwave determ. 2=6127
  - carbon tetrabromide p-xylene complex 2=17027
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  - cathrate hydrates, tri n-butyl sulphonium fluoride hydrate 3=3309

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DPPH radical distortion in crystalline parent hydrazine 4=28336
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dicyandiamide, solid, molec. geometry 4=23504
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